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THE EFFECTS OF ATTITUDE VARIABLES
ON SATISFACTION WITH JOB CHARACTERISTICS

BY



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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled The Effects of Attitude Variables on Satisfaction With Job Characteristics submitted by Walter Alexander Wawruck in partial fulfilment of the requirements for the degree of Master of Business Administration.

ABSTRACT

This study examines the question of how the influence of environmental job characteristics on experienced satisfaction depends upon individual differences in attitudinal variables. Two alternative theoretical formulations proposed as answers to this question were identified from the literature. Hypotheses derived from the theoretical models were tested with a sample of 86 employees of a public utility company.

From the first theoretical formulation, the discrepancy model, it was hypothesized that satisfaction is negatively associated with the absolute discrepancy between perceived and preferred amounts of job characteristics; that the strength of the satisfaction-discrepancy relationship decreases as the importance of a characteristic decreases; and that the maximum level of satisfaction decreases as importance decreases, approaching neutrality as a limit. These hypotheses received strong overall support with a moderately high degree of consistency among the findings for the 37 individual job characteristics examined.

Hypotheses from the second theoretical formulation, the amount model, stated that satisfaction is consistently related to the perceived amount of job characteristics; and that the strength of the satisfaction-amount relationship decreases as importance decreases. Although some significant support was given to these hypotheses, the comparatively weaker results and lack of consistency among the findings for individual job characteristics raised serious question as to the validity of the

amount model. It was concluded that the discrepancy model is the superior description of the psychological process linking environmental characteristics and attitudinal variables to experienced job satisfaction.

It is suggested that the two attitudinal variables indentified as the psychological determinants of satisfaction, the preferred amount and the importance of job characteristics, are relevant dependent variables for the study of the socio-cultural determinants of job attitudes and the study of attitude change as a mode of adaptation to unsatisfactory work role features. It is noted these two attitude variables are respectively the primary independent variables in the apparently disparate equity and expectancy theories of task motivation, and their demonstrated interrelationship in the discrepancy model suggests the possibility of reconciling the two motivation theories. If, as this study suggests, job satisfaction is highly dependent upon individual differences, the implication for management practice is that a policy of job enlargement to increase employee satisfaction must be tailored to individual preferences to be successful. Uniform changes in job design cannot be confidently expected to produce a uniform response in terms of satisfaction.

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CHAPTER I

INTRODUCTION

This study is concerned with specific theoretical models proposed to explain and describe the psychological process linking environmental job characteristics to experienced emotional states of satisfaction and dissatisfaction. A number of different theories regarding the causes of job satisfaction which encompass both work role and personality characteristics have been proposed. The present investigation consists first of a review of the literature to identify the theoretical formulations which have received some measure of support through empirical research, and second of an empirical test of alternative models with a view to identifying the superior predictor of satisfaction.

Satisfaction with Job Characteristics and Individual Differences

By one estimate¹ there have been over 4000 published studies of job satisfaction since 1935. This observation taken together with widespread management concern with employee attitudes, opinions and morale indicates no lack of continuing interest in job satisfaction, its determinants, and its correlates.

Vroom² observes that by far the largest proportion of the

¹Edwin A. Locke, "What is Job Satisfaction?", Organizational Behavior and Human Performance, IV (1969), p. 309.

²Victor H. Vroom, Work and Motivation (New York: John Wiley & Sons, Inc., 1964), pp. 159-162.

reported studies have been concerned with establishing causal relationships between work role characteristics and job satisfaction, and for the most part have dealt with only two sets of variables, one a measure of a characteristic of a work role and the other a measure of job satisfaction. From such studies based on the implicit assumption that job satisfaction is environmentally determined, statistically significant correlations and differences between groups have emerged, but the findings are seldom impressive, with only a small proportion of the variance in satisfaction explained in terms of job attributes and a large variation in the responses of individuals exposed to the same conditions. Vroom attributes the weak findings of these studies to "an over simplified theory which does not do justice to the phenomena with which it purports to deal", and suggests "the prediction of job satisfaction can be improved by considering individual differences in motivational variables as well as differences in the nature of the work role".³

Purpose of the Study

The purpose of the present study is to explore and test possible explanations of the relationship between job characteristics and experienced satisfaction which take into consideration the attitudinal and motivational make-up of individuals. If we accept Vroom's contention that it cannot be said a particular feature of a work role is a source of satisfaction or dissatisfaction without reference to the

³Ibid.

relevant personality features of the individual, a requirement emerges for a logically consistent, fully articulated and testable theoretical model to describe and explain the mechanism or process linking environmental characteristics to experienced satisfaction. This requirement is expressed in the following research question:

How does the influence of job attributes on job satisfaction depend upon the individual preferences and desires of employees?

To the extent that internally consistent and testable theoretical models providing an answer to this question can be identified from the literature and empirical support can be shown for at least one of the alternative formulations, the purpose of the study will have been served.

An Overview of the Conceptual Framework and the Research Method

In order to deal with the question of how the influence of job characteristics on satisfaction depends upon individual differences, a review was made of the literature to identify specific theoretical models proposed to answer the query. From this literature review two alternative formulations were chosen for empirical testing. One model predicted satisfaction to be negatively associated with the discrepancy between perceived and preferred amounts of a job characteristic, while a second model predicted a consistent relationship between satisfaction and the perceived amount of a characteristic. In both models the strength of the relationship was postulated to depend upon the affective salience of the characteristic to the individual. In the limiting case

of no affective salience a neutral response, irrespective of the amount of the characteristic, was predicted from both models. The research question was reformulated to reflect these alternative sets of predictions and five specific research hypotheses were derived from the models as answers to the research question.

To test the research hypotheses, a correlational field survey was conducted. Data were gathered using a questionnaire administered to a sample of 86 office employees drawn from 16 separate work groups in a large government owned utility company. The sample included males and females with job titles ranging from clerk to professional engineer. Full management support was given to the study and all respondents agreed to participate.

Limitations of the Study

The present study explores and tests theoretical models of the influence of job characteristics on satisfaction among employees of a public utility company. It is hoped this investigation will make a useful contribution to knowledge in this area, both by replicating earlier studies in a different setting, and in some instances with a different research method, and by testing two alternative theoretical formulations in a single population. However, the following considerations place a limitation on the inferences drawn.

1. The attitude variables used in the present study are limited to those that are internal to the individual. Data concerning the attitude variables, environmental characteristics and experienced satisfaction are obtained from questionnaires filled out by the same people. This produces a lack of independence among the variables and even a possible confounding of them.

2. Since the method used involves simultaneous measurement of the degree of satisfaction and the perceived external and internal conditions contributing to satisfaction, the direction of causation, as in all correlational research, cannot be inferred from the results and alternative explanations are not ruled out.
3. The sample of respondents is limited to a relatively narrow range of task specialties in a single company so that the range of job conditions encountered, and perhaps degrees of satisfaction, is limited. The fact that the research site was a government owned utility in an urban setting may also limit the range both of job conditions and of attitude variables among individuals.
4. Although the data were not measured on interval or ratio scales, Pearson product moment correlations have been used to report the strength of relationships and their levels of statistical significance; hence, caution should be exercised in applying too strict an interpretation to either the magnitude of the coefficients or their significance. Least squares linear regression was used, again contrary to the known limitations of the measuring technique, to fit obtained functions to the data for one portion of the analysis, and inferences from this particular analysis should be regarded as indicative of a consistent general pattern at best, and not as statistically significant evidence.

Plan of Presentation

In Chapter II the theoretical literature is reviewed and alternative research models describing the relationship between job attributes and job satisfaction are chosen. The variables and their measures, the research models relating the variables, and hypotheses derived from the models are presented in the first part of Chapter III. The concluding portion of Chapter III describes the research method, the sample of respondents, and the procedures used to analyse the data.

In Chapters IV, V and VI the results of the field survey are presented and discussed. The alternative theoretical formulations are compared in the first two of these chapters; Chapter IV compares the

strengths of the satisfaction-discrepancy and satisfaction-amount relationships, while Chapter V examines the effect of the variable importance, or affective salience, on both of these relationships. Chapter VI deals with only one of the research models and examines the effect of the variable importance on levels of satisfaction.

Finally, Chapter VII presents the summary and conclusions of the study, and a discussion of its implications for further research and for management practice.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this chapter is to make a survey of the literature and from this survey to derive research models for the empirical investigation of the question posed by the research problem presented in Chapter I, "How does the influence of job attributes on job satisfaction depend upon the individual preferences and desires of employees?"

The review will proceed by first describing a number of specific theoretical models and propositions, along with relevant findings where such models have been put to empirical test. Secondly, a comparison of the models will be made to identify points of agreement and divergence. An attempt will be made, where possible, to reconcile the various models in terms of both theoretical formulation and power to explain empirical findings. Thirdly, research models to serve as a basis for the formulation of research hypothesis and the operational definition of measured variables will be selected. Finally, the research question will be reformulated in a more precise form reflecting testable differences between the alternative research models.

Specific Models Proposed in the Literature

The terms satisfaction and job satisfaction are not used in a consistent and uniform fashion in the literature. It is useful, therefore, to establish at the outset a distinction between satisfaction, on one hand, and affective orientation or cathectic orientation, on the other. An actor's cathectic orientation to an object involves the

attachment of affective significance or a potentiality for gratification to one or more properties of the object.¹ Satisfaction refers to an emotional state experienced by an actor. Cathectic orientation hence denotes a predisposition, and entails expectations; satisfaction, by contrast, denotes a produced effect, a result.²

Vroom³ presents his review of the theoretical issues raised by the study of job satisfaction by classifying various theories and findings according to a typology based on the variables included as observables:

1. Environmental Models: These tend to view satisfaction as directly caused by environmental characteristics with no reflection of personality mechanisms. Environmental variables are measured either by the researcher directly or indirectly as self-reported perceptions of the individual.

2. Personality Models: Satisfaction is treated as a reflection of personality adjustment. Disatisfaction is attributed to a failure by the individual to make realistic adjustments to the environment.

¹Talcott Parsons and Edward A. Schils, et al., Toward a General Theory of Action (New York: Harper and Row, Publishers, Incorporated, Harper Torchbook edition, 1962), pp. 11-12.

²Victor H. Vroom, Work and Motivation (New York: John Wiley & Sons, Inc., 1964), p. 15, makes the same distinction. In speaking of valence, which refers to affective orientations to particular outcomes, he notes it is important to distinguish between the valence of an outcome (the anticipated satisfaction from an outcome) and its value (the actual satisfaction that it provides). Vroom is not consistent, saying "Job satisfaction ... refers to an affective orientation on the part of individuals toward work roles they are presently occupying" on page 99 of the same book.

³Ibid., pp. 159-172

3. Interactive Models: Both environmental conditions and personality variables are regarded as determinants of satisfaction. This approach requires simultaneous measurement of both sets of variables to reveal the interactions among them.

This scheme is followed in the present review.

1. Environmental Models

Turner and Lawrence⁴ hypothesized that workers would express a more favourable response (higher satisfaction) to more complex or involving tasks than to more highly programmed less demanding work. The primary environmental variables in their study were the intrinsic attributes of the task. By drawing from a number of previous studies of technology, an index of requisite task attributes (RTA index) was constructed and 47 industrial jobs were scored by the researchers.⁵ Questionnaires measuring job satisfaction and worker perception of task attributes (PTA index) were administered to 470 workers in the rated jobs in 11 companies.⁶

Turner and Lawrence⁷ found no significant relationship between the RTA scores and overall satisfaction for the total sample, and only 4 of the 15 separate indices within the overall index were associated with

⁴Arthur N. Turner and Paul R. Lawrence, Industrial Jobs and the Worker (Boston, Mass.: Harvard University, Division of Research, Graduate School of Business Administration, 1965), p. 2.

⁵Ibid., pp. 19-31.

⁶Ibid., p. 9.

⁷Ibid., p. 49.

satisfaction at a significant level. The perceived attribute indices (PTA scores), however, showed a significant association with both the RTA scores and job satisfaction. When the sample was divided into workers in town, mixed, and city settings, city workers were found to be more satisfied with low RTA jobs than with high scoring jobs; town workers were more frequently satisfied with high than low scoring jobs; while workers in a mixed cultural setting revealed no significant association between RTA scores and job satisfaction.⁸ The results further revealed that city workers distorted their perceptions of task attributes, tending to give higher ratings to low RTA jobs and lower ratings to high RTA jobs, while the town workers' PTA scores showed good agreement with the ratings by the researchers.⁹

2. Personality Models

None of the specific models or research findings using personality variables alone to predict satisfaction are reviewed in the present paper. Vroom indicates a summary of the results of such investigations may be found in Herzberg et al.¹⁰

3. Interactive Models

Morse¹¹ proposes that satisfaction is determined by the level

⁸Ibid., pp. 73-74.

⁹Ibid., p. 161.

¹⁰Fredrick Herzberg, et al., Job Attitudes: Review of Research and Opinion (Pittsburgh: Psychological Service of Pittsburgh, 1957), cited by Vroom, Work and Motivation, p. 161.

¹¹Nancy C. Morse, Satisfactions in the White Collar Job (Ann Arbor: University of Michigan, Institute for Social Research, Survey Research Center, 1953), pp. 27-39.

of tension generated by an intrinsic need, and the subsequent reduction in tension as the need is partly or wholly fulfilled through interaction with the environment; specifically, individuals are hypothesized to have differing need strengths and hence different initial tension levels, but all individuals experience equal degrees of tension reduction for perceived equal need fulfilling returns from the environment. Morse predicts that for individuals with high initial tension levels, greater dissatisfaction accompanies deprivation and greater satisfaction accompanies fulfillment than for individuals with low initial tension levels. To predict satisfaction, Morse proposes a functional relationship of the form $S = f(T_1 - T_2) - g(T_2)$ where satisfaction (S) after interaction with the environment increases by an amount related to the tension reduction ($T_1 - T_2$) experienced, and decreases by an amount related to the remaining tension level (T_2). Morse does not specify the range of conditions to which the formulation is applicable, but clearly the expression cannot hold for the condition where T_2 exceeds T_1 , for if $f()$ and $g()$ are monotonically increasing functions, the formulation contradicts Morse's assertion that at some level of environmental return high need individuals will experience greater satisfaction than will low need individuals.

Using data gathered in a survey of 801 male white collar workers, Morse¹² attempts to illustrate her hypothesis by operationalizing initial tension level as the importance of being promoted (choice of 4 graduated responses) and the degree of tension reduction due to environ-

¹²Ibid.

mental return ($T1 - T2$) as the perceived chance of being promoted (choice of 5 graduated responses) to predict satisfaction with promotion chances (choice of 5 graduated responses). In analyzing the data, Morse first discarded the responses of 33 persons who reported promotion to be of little or no importance, apparently because their responses were inconsistent with the predictions. The remaining data were grouped into 15 cells defined by the promotion chance and importance responses, and for each group an arithmetic mean of the ordinal satisfaction scores was computed. By manipulating the ordinal values assigned to importance and promotion chance scores, Morse came up with a formula to predict satisfaction, and reported a rank order correlation of .99 between predicted satisfaction and group mean satisfaction scores. The distribution of group mean satisfaction scores generally confirmed the prediction that at a given level of promotion chance, satisfaction decreases as importance increases. For the fulfillment condition, however, the prediction of greater satisfaction as importance increases was not supported.

Vroom¹³ proposes a cognitive model to explain and predict work role behavior and job satisfaction. Fundamental to the model is the notion of valence which is defined as the anticipated satisfaction assigned to a situation by an individual, that is, the affective orientation of the individual to a situation or outcome. Implicitly, Vroom proposes that satisfaction with an outcome attained is directly related to the valence of that outcome anticipated. The valence of an outcome anticipated is postulated to be a function of the perceived instrumentality of

¹³Vroom, Work and Motivation, pp. 14-19 and pp. 163-165.

the outcome for all other outcomes and the valence of such other outcomes, and a function of the expectancy the outcome will be realized. The valence of a work role, and hence satisfaction with a work role, is predicted to depend on the perceived frequency or probability of attaining particular outcomes multiplied by the valence of the outcomes.

Vroom¹⁴ reports a study supporting the multiplicative model. It was found the relationship between job satisfaction and extent of participation in decision making (frequency of attainment) was dependent upon the individual's need for independence (valence of outcome). The correlations between satisfaction and extent of participation were: .55 for those high in independence need; .31 for those medium in independence need; .13 for those low in independence need. Similarly, the need for independence was positively associated with satisfaction for the high participation group, negatively associated for the low participation group, and not associated for the medium participation group. These findings are illustrated graphically in Figures II-1 and II-2, as there will be occasion to again refer to them in the context of other findings.

Level of aspiration theory is concerned primarily with goal setting and task performance behaviors, and only those emotional responses consisting of feelings of success or failure have been described by researchers in this area. Lewin,¹⁵ et al. in their summary of research findings on the level of aspiration conclude that feelings of success or

¹⁴Ibid., p. 165.

¹⁵Kurt Lewin, et al., "Level of Aspiration," Personality and the Behaviour Disorders, ed. by J. McV. Hunt (New York: Ronald, 1944), pp. 373-378.

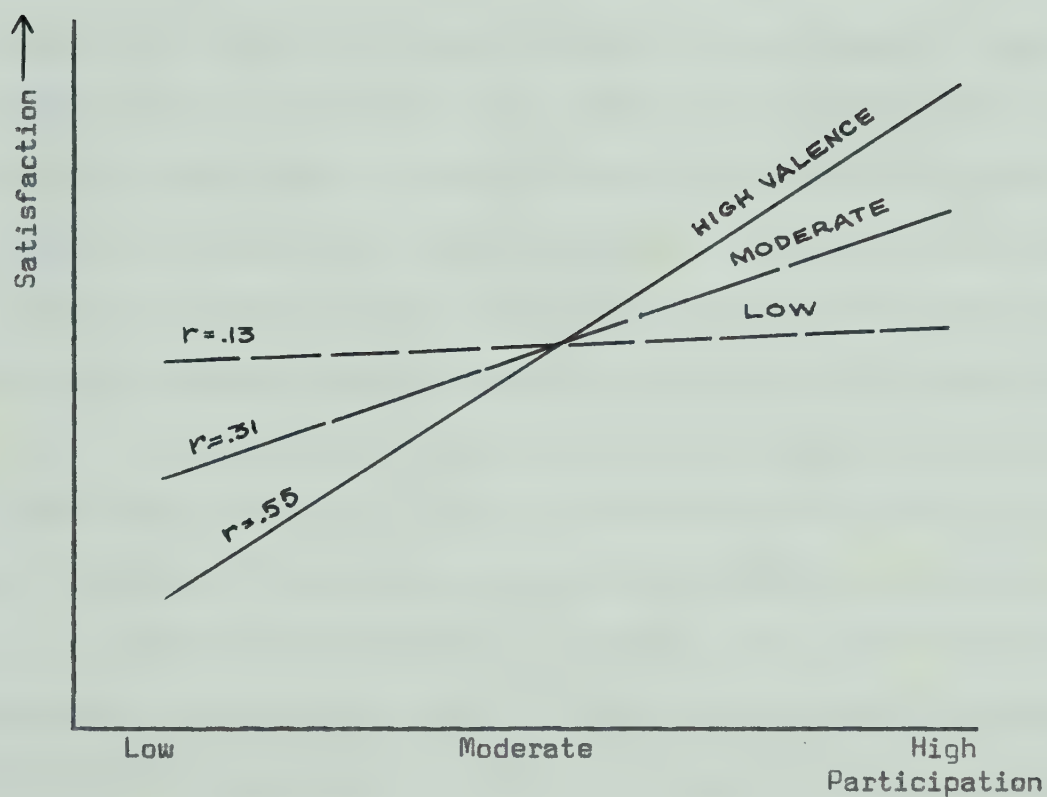


FIGURE II-1

GRAPHICAL DISPLAY OF SATISFACTION-
PARTICIPATION RELATIONSHIPS REPORTED
BY VROOM*

*Vroom, Work and Motivation, p. 165.

failure experienced by an individual depend not upon the absolute level of achievement, but rather upon the level of achievement relative to certain individual standards, particularly those standards identified as the level of aspiration. Thus, while level of aspiration theory does not specifically refer to satisfaction as an emotional response, it does suggest the possibility of generalizing the notion of an individual standard for evaluating goal attainment to similar standards for the various characteristics and elements of an individual's work role.

Equity theory refers to a number of independently developed formulations based on the relative rewards and deprivations in an employment situation. The various equity formulations show no testable differences in the areas where they would make predictions¹⁶ and the formal conceptions developed by Adams,¹⁷ being the most explicit and extended, have served as the basis for most of the recent research attention.¹⁸ The theory is concerned with the ratio of individual inputs (investments or something of value put into a job) and outcomes (rewards or returns of value received from a job). An individual is postulated to compare his input-outcome ratio with that of a relevant comparison person, and on the basis of such a comparison experiences equity if the ratios are

¹⁶Robert D. Pritchard, "Equity Theory: A Review and a Critique," Organizational Behavior and Human Performance, IV (1969), p. 176; and, Vroom, Work and Motivation, p. 170.

¹⁷J. S. Adams, "Toward an Understanding of Inequity," Journal of Abnormal and Social Psychology, 67 (1963), 422-436; and "Inequity and Social Exchange," Advances in Experimental Social Psychology, ed. by L. Berkowitz, Vol. II (New York: Academic Press, 1965), pp. 19-25.

¹⁸Pritchard, "Equity Theory: A Review and a Critique," p. 176.

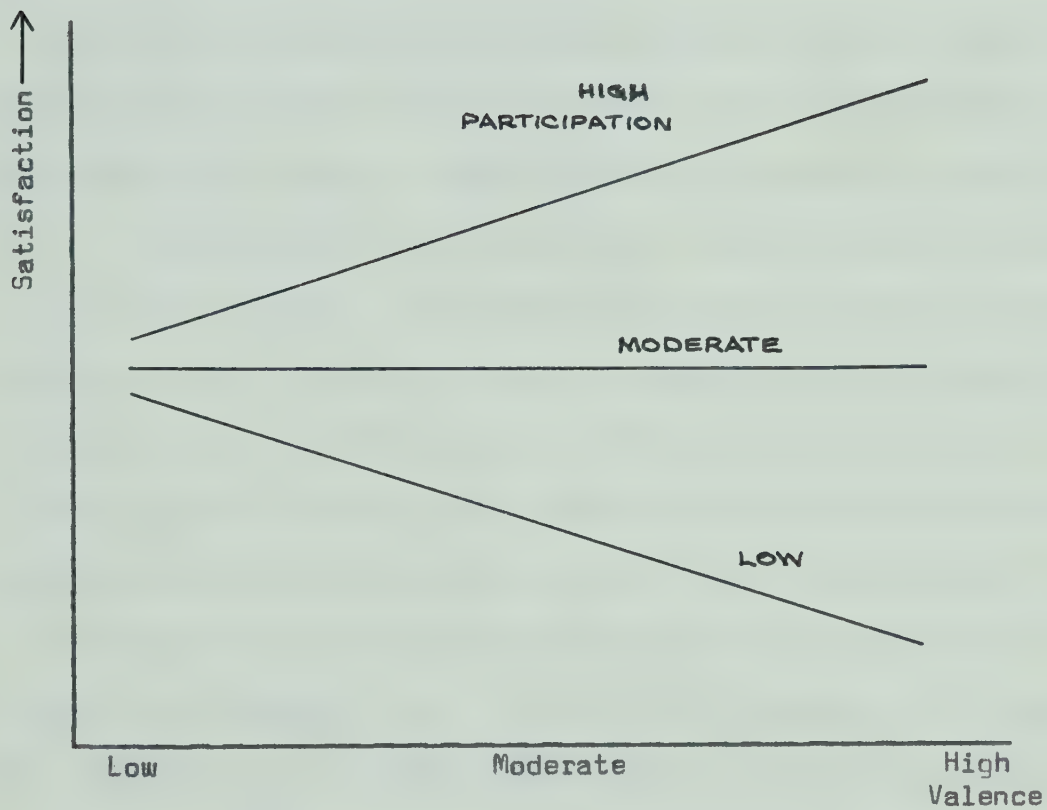


FIGURE II-2

GRAPHICAL DISPLAY OF SATISFACTION-
VALENCE RELATIONSHIPS REPORTED
BY VROOM*

*Vroom, Work and Motivation, p. 165.

equivalent or inequity if the ratios are discrepant. The degree or magnitude of the inequity, experienced as tension, is said to vary as a function of the degree of discrepancy between the two ratios. Finally, the experienced tension is held to have motivating properties, inducing the individual to make a response which will reduce the felt inequity.

Experimental investigations of equity theory have focused on pay as a job outcome. The independent, or manipulated, variable is manifestly the "feeling of inequity" induced by telling experimental subjects they are either over qualified or under qualified for the rate of pay they will receive, while control subjects are told their qualifications are commensurate with the rate of pay. The dependent variable is an overt behavioral response, generally the quantity and quality of output on an assigned task. Typical of this approach, for example, is the study by Adams and Rosenbaum.¹⁹ In his 1969 review of the literature, Pritchard²⁰ concludes that predictions made from equity theory regarding underpayments are generally supported, while the effects of overpayment have not been confirmed. Pritchard observes that because the experimental approaches employed did not inquire as to the actual mental states and emotional responses of the experimental subjects, contamination due to other motives, such as the maintenance of self-esteem, may be introduced by the induction procedure and alternative explanations of

¹⁹J. S. Adams and W. B. Rosenbaum, "The Relationship of Worker Productivity to Cognitive Dissonance About Wage Inequities," Journal of Applied Psychology, 46 (1962), pp. 161-164.

²⁰Pritchard, "Equity Theory: A Review and a Critique," p. 204.

observed behavior are not ruled out.

To account for the reported findings on overpayment, and to further elaborate the cognitive and emotional aspects of equity theory, Pritchard²¹ proposes a number of modifications to Adam's formulation. It is suggested that pay satisfaction be introduced as a major intervening motivational variable between the perceived situation and the behavioral response. Pay satisfaction is postulated to reflect a combination of two constituent components: self-equity and comparison-equity. Self-equity involves comparing perceived situational rewards to an internal standard without regard to any comparison person; the individual is dissatisfied with his pay below this standard, satisfied if the standard is met, and more satisfied if the standard is exceeded. Comparison equity adds to or detracts from pay satisfaction in the fashion formulated by Adams; however, the magnitude of this component is held by Pritchard to be dependent upon the nature of the exchange relationship -- strongest in an intimate face-to-face situation, and diminishing to zero in an impersonal exchange with a third party other than the comparison person, or the typical organizational employment exchange situation.

In review, equity theory research has focused on financial rewards and overt behavior, with satisfaction included only as an inferred explanatory variable. While the literature suggests equity theory postulates may be extended to job characteristics other than pay, there does not appear to have been any investigation of such other possible

²¹Ibid., pp. 205-210.

rewards. Of relevance to the prediction of job satisfaction, however, is the postulate that individuals do cognize standards against which job outcomes are assessed, whether such standards be internal and individual, or are derived by situational comparison of one's self to relevant others. Perceived discrepancies between equitable standards and actual outcomes are said to generate a state of satisfaction or dissatisfaction in the individual, with the degree of emotion dependent upon the magnitude of the discrepancy.

Locke²² has proposed a model to predict satisfaction from the discrepancy between the perceived amount of a characteristic and an individual standard containing a specification of a preferred amount of the characteristic in question. This standard is held to also contain an affective component which assigns an affective salience or gratification potential to the preferred amount. Satisfaction is predicted to decrease as the absolute discrepancy between the perceived and preferred amounts increases, with maximum satisfaction experienced when no discrepancy is cognized. The greater the affective salience, or importance, attached to the standard the greater the magnitude of the maximum satisfaction experienced and the greater the rate at which satisfaction decreases as the discrepancy increases. In the limiting case, a standard with no affective salience would evoke a neutral or indifferent response no matter what magnitude the perceived discrepancy.

Two kinds of content standard are distinguished by Locke:²³ one

²²Edwin A. Locke, "What is Job Satisfaction?", Organizational Behavior and Human Performance, IV (1969), 309-336.

²³Ibid., pp. 317-319.

kind, as described above, in which the most preferred amount of a characteristic is a finite or optimum quantity; and a second kind where the preferred amount is unlimited or infinite. While the majority of job characteristics are predicted to be of the optimum level kind, pay is held to be, for most individuals, of the second kind where maximum affective significance is attached to maximum amounts. Even for standards of the unlimited kind, however, it is postulated that some "practical ideal" standard is operative in making assessments leading to satisfaction.

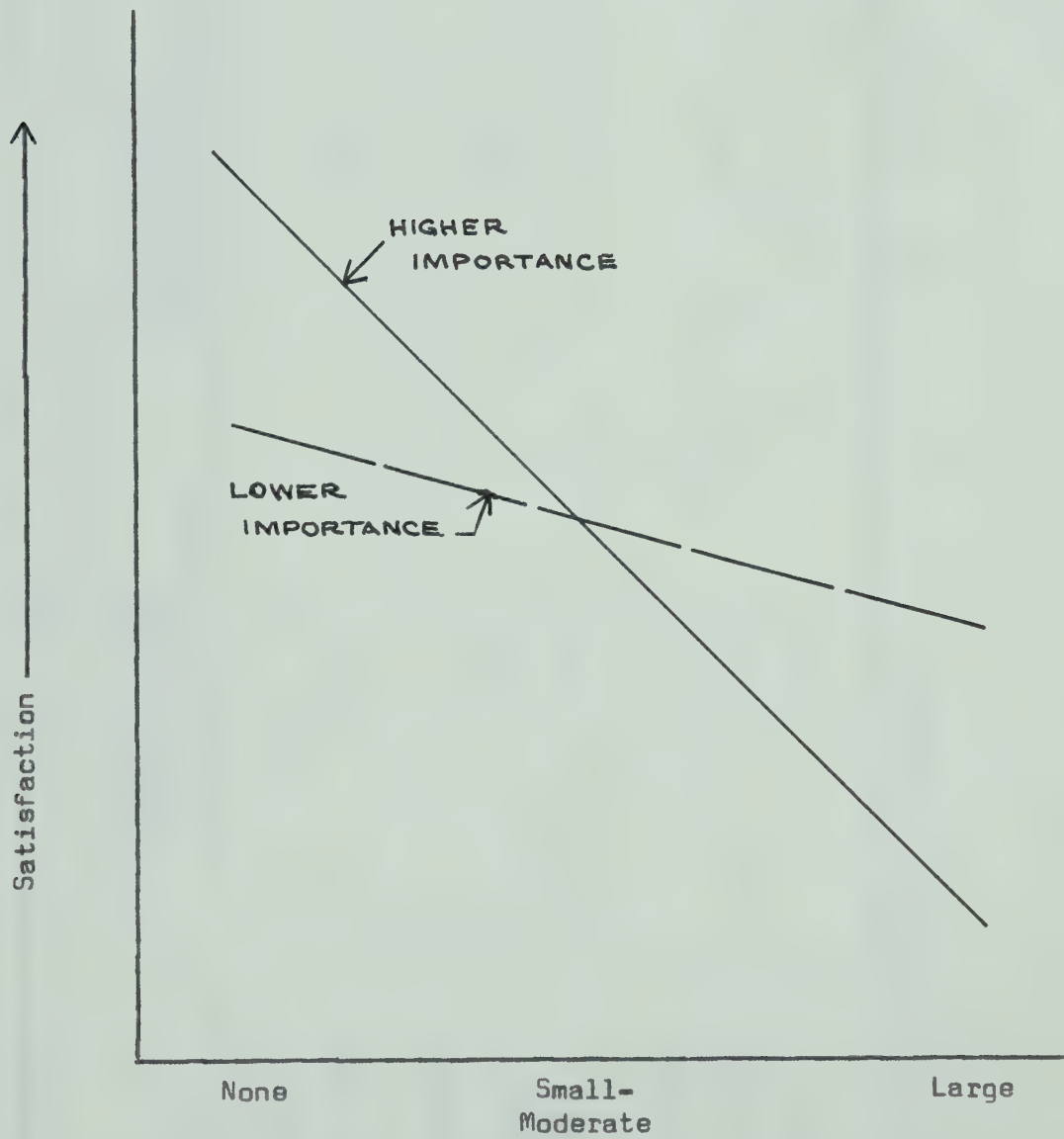
Findings from both correlational and experimental studies are reported by Locke²⁴ in support of the proposed model. A selection of these studies is described here to illustrate the findings. In a survey of 30 full time employed adults, respondents were asked to rate anticipated satisfaction with varying amounts of work week length and pay, and to describe their individually preferred amounts for both job characteristics. Rank order correlations between satisfaction and discrepancy from individual standards yielded a mean rho of .99 within respondents for both characteristics. In a student laboratory study with 20 subjects on a reaction time task paying a monetary bonus for a target score the mean correlation between perceived discrepancy and satisfaction with performance within subjects was $r = -.92$. In a similar study 21 subjects were assigned a reaction time task with a bonus for target scores on only half the experimental trials. For the seven individuals who indicated that success was more important to them on paid trials, mean inter-

²⁴Ibid., pp. 326-329.

subject satisfaction ratings at each of three discrepancy levels were computed for each experimental condition. A significantly steeper slope ($p < .01$) was found for the higher importance condition on a plot of mean satisfaction versus discrepancy in performance, with greater satisfaction accompanying success and greater dissatisfaction accompanying large discrepancies for the trials considered more important. Figure II-3 illustrates the nature of the satisfaction-discrepancy functions of the optimum amount standard kind for which the last study cited above provides support.

Three survey studies of job attitudes providing a test of the model are described by Locke.²⁵ The findings are summarized in Table II-1. In study (A) respondents directly rated the discrepancy between the amount of an element they had in a job and the amount they ideally should have had on an ordinal scale, while in studies (B) and (C) respondents were asked to indicate on a scale of graduated empirical alternatives both the amount of a job element they perceived they were getting and the amount they ideally should be getting. Apparently the absolute difference between rank scores for the two responses was used as a measure of discrepancy in studies (B) and (C). In all three studies satisfaction with each element was rated on an ordinal scale, the respondents were students retrospectively assessing their summer jobs. No attempt to measure or control for the importance of the various job elements to the individual respondents is mentioned.

²⁵Locke, "What is Job Satisfaction?", pp. 324-326.



Absolute discrepancy between
perceived and preferred amounts.

FIGURE II-3

TYPICAL SATISFACTION-DISCREPANCY
FUNCTIONS ADOPTED FROM LOCKE*

*Locke, "What is Job Satisfaction?", p. 329.

TABLE II-1

SUMMARY OF SURVEY FINDINGS REPORTED
BY LOCKE*

Correlate of Satisfaction	Correlation Coefficients (r)	
	Between subjects, within elements, average over elements	Within subjects, between elements, average over subjects
(A) <u>N = 62, 8 elements</u>		
Perceived Discrepancy	-.61	-.76
(B) <u>N = 72, 10 elements</u>		
Absolute Discrepancy	-.81	-.72
Perceived Amount	.51	--
(C) <u>N = 72, 25 elements</u>		
Absolute Discrepancy	-.72	-.70
Perceived Amount	.50	--

*Locke, "What is Job Satisfaction?", pp. 324-326.

Referring to the findings shown in Table II-1, the unexplained variance in the between-subject satisfaction-discrepancy correlations is attributed to differences in the shape and slope of satisfaction functions among individuals for a given element, while the unexplained variance in the within subject correlations is attributed to both variations in the importance of various elements and the incommensurate units in which discrepancies are measured. The experimental studies cited by Locke,²⁶ and described earlier in this paper, demonstrate that substantial increases in measures of association can be attained by controlling for these sources of error.

Comparison and Reconciliation of the Models Reviewed

From the review of the literature, the following emerge as the variables that have been hypothesized and studied by various investigators as the psychological determinants of satisfaction with a characteristic, element, or aspect of a work role:

1. The perceived amount of the characteristic.
2. A cognized preferred or most desired amount of the characteristic.
3. A cognized affective significance attached to the characteristic.

The models and findings of the various investigators will be reviewed and examined in terms of each of these postulated determinants. Empirical support for the various models will be examined.

²⁶Ibid., p. 326.

1. The Perceived Amount

Implicit in the environmental models are the assumptions that satisfaction is directly related to the amounts of particular characteristics an individual has in his work role; that greater amounts of these characteristics invariably lead to greater satisfaction; and that the degree of satisfaction experienced is the same for all individuals faced with the same amount of a particular characteristic. Proceeding from these, or similar, assumptions, investigators have designed studies to identify and document these universal satisfaction producing characteristics of the work role. Illustrative of this approach is the study by Turner and Lawrence²⁷ cited earlier in this paper.

The findings of the Turner and Lawrence²⁸ study suggest that perceived measures of job characteristics are more strongly associated with satisfaction than are objective measures; only when there is little or no perceptual distortion by respondents will objective measures of task attributes serve as a predictor of job satisfaction. The interactive models reviewed would predict a strong association between perceived attributes and satisfaction only if members of the population under study have similar relevant attitudinal features, and as the variance in these features increases, the strength of correlations will decline. The Turner and Lawrence finding that stronger associations between job attributes and satisfaction emerged when their sample was subdivided on cultural-demographic bases can be explained by supposing a greater homo-

²⁷Turner and Lawrence, Industrial Jobs and the Worker, pp. 19-31.

²⁸Ibid., pp. 73-74 and p. 161.

geneity of personality features within a particular sub-culture than in a cross-cultural sample.

In the Morse²⁹ model the perceived amount of a characteristic is held to contribute directly to need tension reduction and hence to contribute to satisfaction by an amount directly related to the perceived amount of the characteristic. The datum from which the perceived amount is subjectively measured, according to this model, is the condition of complete deprivation or a zero amount.

While Vroom³⁰ speaks of the extent to which desirable outcomes are realized in a work role, the extent of realization is invariably expressed as an expectancy or an instrumentality, both of which are dimensionless relative frequency ratios. The desirable outcomes themselves are not treated as variable quantities, but simply as situations which are fully present or wholly absent. The desirable outcomes are situations or characteristics "which might be assumed to be generally attractive to persons",³¹ such as pay, variety, consideration from supervisors, and control over work pace.³² Vroom's formulation suggests that the characteristics of a work role are perceived not as varying amounts or quantities, but as events with some frequency or probability of occurrence.

²⁹Morse, Satisfactions in the White Collar Job, pp. 27-39.

³⁰Vroom, Work and Motivation, p. 174.

³¹Ibid., p. 279.

³²Ibid., p. 174.

2. The Preferred Amount

Level of aspiration research indicates that persons evaluate success or failure in task achievement relative to individual standards, and this suggests that a similar process of evaluation relative to an individual standard may be involved in determining feelings of satisfaction or dissatisfaction with job characteristics. Equity theory similarly suggests that individuals cognize standards against which employment rewards are assessed, with the individual standard either reflective of one's own qualities and investments, (Pritchard) or reflective of the relation between one's self and a relevant other (Adams). A cognized standard describing a preferred or most desired amount of a characteristic is central to Locke's model. It is suggested by Locke³³ that for the majority of job aspects individuals prefer a finite optimum amount rather than an unlimited maximum amount, one notable exception being pay; but, even in the case of pay a practical finite amount serves as a standard of comparison. In the matter of pay, Pritchard³⁴ is in agreement with Locke, proposing that in the normal employment situation individuals unconditionally prefer greater to lesser financial rewards, and experience satisfaction or dissatisfaction from their evaluation of pay as above or below an internal standard of self-equity.

The Morse model employs the zero amount of a characteristic as the datum for measurement and comparison, with no clear specification as

³³Locke, "What is Job Satisfaction?", pp. 317-319.

³⁴Pritchard, "Equity Theory: A Review and a Critique," p. 206.

to what amount of environmental return would constitute need fulfillment. Initial need tensions are held, on one hand, to have finite magnitudes, but all increases in perceived characteristics are postulated to result in a corresponding incremental reduction in need tension on the other, suggesting that there is no upper limit to needs, or, in other words, it is impossible to get too much of a good thing.

The Vroom model, as noted earlier, postulates that individuals cognize certain outcomes or situations as desirable, but such desirable situations are not characterized by a variable content; rather, they assume one of two possible modes at any given time: presence or absence. The relative frequency with which such desirable outcomes do occur is held to be directly related to satisfaction. Hence, if there is a notion corresponding to a preferred amount in the Vroom formulation, it is a probability of 1.0 or an instrumentality of +1.0 for desirable outcomes, or, in other words, it is always more satisfying to have a good thing more often.

By contrast to Vroom's formulation, the Locke model is much less stringent in dealing with amounts of characteristics in a work role. The only requirement of the Locke model is that a characteristic be continuously variable in a fashion that makes the notions of "more" and "less" subjectively meaningful. Thus, characteristics of situations such as frequencies of events and probabilities of transformation to other situations can be just as easily incorporated as physical or temporal quantities.

3. Affective Significance

The attachment of affective significance to characteristics of

a work role as a cognized subjective phenomenon is explicit only in the Locke and Vroom models. Vroom proposes that a potential for gratification, or valence, is assigned to desirable outcomes and explains the valence of particular outcomes or situations in terms of their instrumentality or expectancy for desirable outcomes. Locke, on the other hand, assigns a potential for gratification to a preferred amount of the characteristic in question, and explains the affective potential of other amounts in terms of the discrepancy from the preferred amount. In both models the affective component is conceived as a variable quantity of either positive or negative sign.

Morse's model, cast in terms of needs, tension and fulfillment, treats satisfaction, the only affective element, as a spontaneously generated state reflective of the theoretical construct tension level. Apparently derived from unconscious drive theory, Morse's formulation attempts to establish a direct connection between drives and perception without explication of cognitive and affective orientations.

Equity and aspiration level theories, while specifically cast in cognitive terms, do not elaborate upon differential attachments of affective significance to cognized objects or their properties. In terms of the Locke model, these theories treat all characteristics as having equal importance for all individuals.

In summary, only the Locke model explicates the relationship among all of the three variables which have been proposed as determinants of satisfaction by the various investigators reviewed. As noted above, the relevant propositions of equity theory and aspiration level theory as predictors of emotional response are consistent with the Locke model.

The conceptual differences between the Locke and Vroom models are somewhat greater, but it may be possible to derive Vroom's formulation as a special case of the Locke model; specifically, the case where the preferred situation is an indivisible event whose "amount" varies only in the sense that its frequency of occurrence is variable, and where the event, like pay, is inevitably regarded as desirable appears to hold some promise of reducing to the Vroom model.

The Morse model, with its lack of internal consistency and resort to unobservables as explanatory constructs does not appear to be a serious contender as a theoretical framework for the prediction of satisfaction.

The empirical support for the Locke model is perhaps the most impressive. The mean correlations between the proposed determinants range from $r = -.92$ and $\rho = .99$, for the intra-individual single element case, to $r = -.61$ to $-.81$, for the inter-individual single element case, to $r = -.70$ to $-.76$, for the intra-individual multiple element case. In each of the latter two cases a logical accounting for the increase in unexplained variance can be made in terms of measuring difficulties rather than by resort to "uncontrolled variables". Referring to Table I, it may be seen that for the same sets of data, higher correlations are yielded by the Locke model than by environmental return or unlimited need formulations.

While the conceptual reconciliation of the Vroom and Locke models may present difficulties not immediately soluble, it is interesting to note that the findings reported by Vroom in support of his formulation are readily predicted from the Locke model. This may be seen by comp-

aring Figures II-1 and II-2 with Figure II-3. To obtain the results displayed in Figures II-1 and II-2, it is necessary only to assume that the majority of respondents in the high and medium independence need groups in the population studied by Vroom would express a preference for a high degree of participation over a medium or low degree.

The data reported by Morse as an illustration of her model were unfortunately manipulated and analysed in a highly questionable fashion, and it is difficult to know what significance may be attached to the associations among variables which purportedly emerge. When Morse's³⁵ reported group mean satisfaction scores are recast in terms of the Locke model, the relationships which emerge appear consistent with Locke's predictions, but again the significance is unknown.

Summary and Selection of the Research Models

From the foregoing review of the literature, two alternative models describing the relationships among environmental and personality variables to predict satisfaction, both consistent with reported empirical findings, can be identified:

A first model which predicts satisfaction with a job element will vary with the magnitude of the discrepancy between the perceived and a finite individual standard describing a preferred amount of the job characteristic. The Locke model is the most comprehensive and fully explicated instance of this first model. This formulation is consistent with

³⁵Morse, Satisfactions in the White Collar Job, p. 36.

the propositions of equity and level of aspiration theory that the emotional response to situational characteristics is governed by an evaluation relative to a cognized individual standard.

A second model which predicts satisfaction will vary as the absolute perceived amount of a job characteristic. The Vroom model most closely approaches this formulation, especially when the restriction that amounts of environmental characteristics are perceived as relative frequencies of occurrence is relaxed. This second model is similar to the implicit theoretical assumptions of the environmental models and the unlimited need formulation presented by Morse.

In both of the alternative models the intensity of experienced satisfaction is predicted to vary according to the affective salience, valence, or importance attached to the characteristic by the individual. In the limiting case, a characteristic with no affective salience will evoke a neutral response without regard to the perceived amount.

Because the Locke model requires the measurement of all three variables proposed as determinants of satisfaction by other investigators, survey research using this conceptual frame yields data which can be analysed in terms of the second model, and the predictive powers of the alternative formulations can be directly compared. In order to make explicit the differences in predictions from the alternative formulations, both models are chosen as research models for the study.

Reformulation of the Research Problem

From the relationships predicted in the research models, it is possible to state the research problem originally posed, "How does the

influence of job attributes on job satisfaction depend upon the individual preferences and desires of employees?", in a more precise form. The following sequentially interrelated questions are a more specific elaboration of the original query.

1. Is there a consistent negative association between satisfaction and the discrepancy of the perceived amount of a job characteristic from the amount individuals would prefer to have, or alternatively, does satisfaction consistently vary as the perceived amount of the characteristic in question?
2. Is the strength of the satisfaction-discrepancy relationship, or alternatively the strength of the satisfaction-amount relationship, greater among individuals who perceive a job characteristic as having a high affective significance (or valence, or importance) than it is among individuals who perceive the characteristic as having a low affective significance?
3. Does indifference to the amount of a job characteristic lead to a neutral emotional reaction, or is indifference accompanied by a chronic condition of either satisfaction or dissatisfaction with the characteristic?

In order to deal with these questions, Chapter III will discuss

the variables and their measures, outline alternative conceptual models to guide the study, and then discuss the methods used to collect and analyse the data.

CHAPTER III

CONCEPTUAL FRAMEWORK AND THE RESEARCH METHOD

The preceding chapter has been concerned with stating the research problem and examining the literature relevant to developing theoretical models relating satisfaction to job characteristics. In this chapter each of the major variables identified in the previous chapter is given an operational definition. Alternative research models are presented and the research hypotheses derived from the models are stated. Finally, the methods used to collect and analyse the data are described.

Discussion and Operationalization of the Variables

Job characteristics - These are the attributes of the individual job, including required and optional activities, mental states, and interactions, as well as a number of organizational and social attributes intimately associated with a job.

The job attribute list developed by Turner and Lawrence¹ served as a guide for the selection of characteristics to be included in the study. The criteria for including a particular characteristic were:

- (i) A subjective judgement that the job characteristic had a likelihood of evoking an emotional response of satisfaction or dissatisfaction.
- (ii) The characteristic was an apparent and manifest aspect of the potential sample of jobs to be studied.

¹Turner and Lawrence, Industrial Jobs and the Worker, pp. 19-27.

Through an examination of organization charts, job descriptions, performance reviews and exit interview reports, together with suggestions from knowledgeable persons at the research site, the following attribute categories were selected for inclusion:

- (i) Variety (6 items).
- (ii) Autonomy and choice (7 items).
- (iii) Knowledge and training (3 items).
- (iv) Responsibility (3 items).
- (v) Identity; Visibility and Originality (8 items).
- (vi) Interaction (6 items).
- (vii) Advancement (2 items).
- (viii) Pay and benefits (1 item).
- (ix) Occupational prestige (1 item).

Each of the 37 items was constructed as an empirically anchored graduated scale describing varying amounts or levels of a particular characteristic in the attribute category. For Item 36, dealing with pay and benefits, the scale refers to the amount of pay relative to the minimum required for an adequate living standard, and thus does not indicate the absolute level of monetary reward. For occupational prestige two separate scales, Items 37 and 38, were used to describe female and male occupations respectively. The items as they appeared in the questionnaire used for a data collection are shown in Appendix I, attached.

A preliminary version of items was circulated to approximately 30 supervisors in the organization studied for review and critical comment. Because the members of this panel of reviewers were intimately

familiar with the potential sample of jobs, the majority having themselves worked in similar jobs, this review served as a pretest of employee comprehension and situational relevance of the items. As a result of the review, modifications were made to the wording and scale ranges of virtually all items, one was deleted, and five additional items were constructed.

Perceived Amount - This refers to a cognitive judgement or estimate by an individual of the amount or level of a characteristic in his job. A measure of the perceived amount was obtained by presenting a respondent with a questionnaire item and asking him to choose the scale response which most accurately describes what his job is like.

For coding and scoring purposes, the alternative scale responses for each item were assigned successive integers from one up in the order written, and an individual response numerically identified in this fashion represents an ordinal measure of the amount of the characteristic in question.

Preferred Amount - This is the individual standard describing the amount of a job characteristic one would prefer to have in his job. The preferred amount was measured by asking the respondent to choose the scale response on a questionnaire item which most accurately describes what his job should be like in the practical ideal case. Individual responses to this question were coded and scored in the same way as the perceived amount.

Discrepancy - This is the deviation of the actual amount from the preferred amount of a job characteristic as perceived by an individual. No direct measurement of this variable was made, but rather the

absolute numerical difference between the rank scores for the perceived and preferred amounts was taken as an ordinal measure of the discrepancy perceived by the respondent for a given characteristic. The indirect measurement of discrepancy in this fashion implies that the item scales are perceived by the respondents as ordered metric scales.²

An alternative method of measuring discrepancy that does not require the assumption of an ordered metric scale is to ask respondents to provide a direct ordinal rating of the magnitude of the perceived discrepancy by choosing a response, for example, from 'non-some-moderate-large-very large' or a similar scale. Empirical findings reported by Locke³ show that for intersubject comparisons the results obtained by the difference in ordinal scores method reflect less measuring error than do results obtained by the direct rating measure of discrepancy. On the basis of Locke's reported findings the absolute difference method was chosen for measuring discrepancy in the present study.

Importance - This refers to the affective salience of a job characteristic to an individual. A measure of importance was obtained by asking respondents how important a reason for being satisfied or dissatisfied a job characteristic is, and giving a choice of four graduated responses ranging from not at all important to very important. Importance is conceived to be a continuous variable and the alternative questionnaire responses in sequence are taken to represent an ordinal measure of its magnitude.

²Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, 1956), p. 767. In strength an ordered metric scale lies between an ordinal scale and an interval scale.

³Locke, "What is Job Satisfaction?", pp. 324-325.

Satisfaction - This is an experienced emotional state of varying sign and intensity; a produced effect which may vary from an emotion of extreme displeasure, through neutrality, to an emotion of extreme pleasure. Satisfaction was measured by asking a respondent to describe how satisfied he is with a particular job characteristic, and giving a choice of seven graduated responses ranging from very satisfied, through neither satisfied or dissatisfied to very dissatisfied. The alternative responses are taken to provide an ordinal measure of satisfaction as a continuous variable.

The wording and sequence of the individual questions employed to obtain measures of the perceived amount, the preferred amount, importance and satisfaction for each of the job characteristics studied are shown in Appendix I.

The Research Models

Figures III-1 and III-2 are abbreviated forms of two alternative theoretical models describing the relationships among environmental and personality variables to predict satisfaction. In both models, satisfaction is treated as the dependent variable, with the amount of a particular job characteristic the independent environmental variable.

Both models are cognitive with variables cast in terms of the individual's perceptions of existents and his own mental states. The design of the study includes no provisions for independent observation of overt behavior or environmental features to anchor the cognitive variables.

The Discrepancy Model - Figure III-1 is a schematic display of

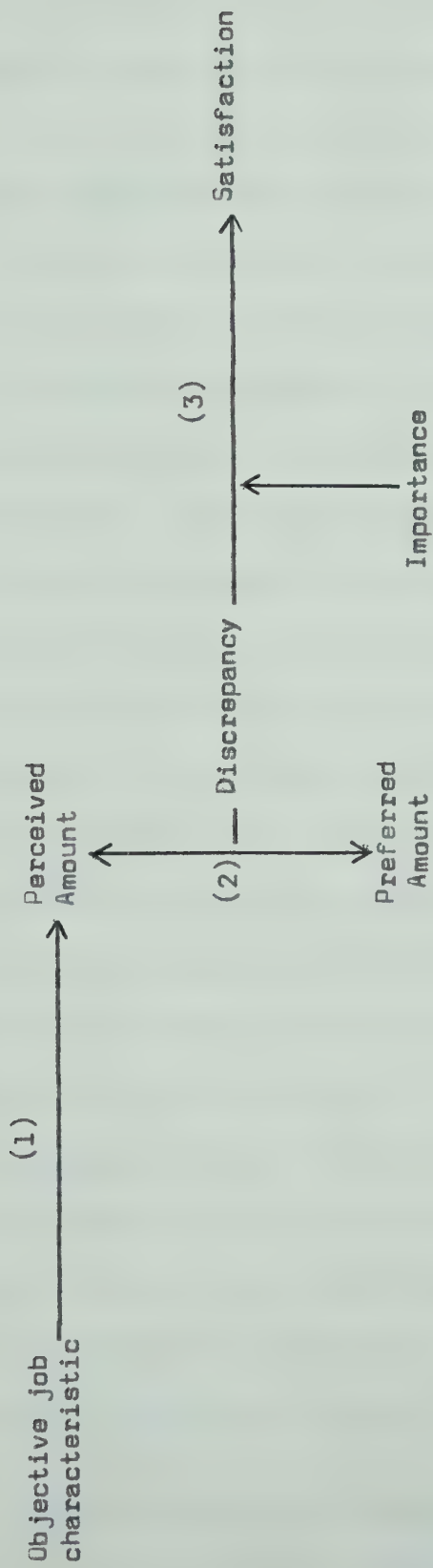


FIGURE III-1
THE DISCREPANCY MODEL IN ABBREVIATED FORM

the first model relating the variables. The model is based primarily on the theoretical propositions and research findings of Edwin Locke.⁴ For convenience of reference, this model is referred to as the discrepancy model in the subsequent discussion and analysis.

Referring to Figure III-1, the arrows connecting variables illustrate the process hypothesized to culminate in a state of satisfaction. (1) a cognitive judgement is made. The job characteristic is perceived and its amount is judged or estimated. (2) An evaluative judgement is made. The perceived amount is compared to the standard describing the preferred amount to evaluate the magnitude of the discrepancy. This process of evaluation gives rise (3) to a state of satisfaction with an intensity which is a function of both the magnitude of the discrepancy in amounts and the importance attached to the characteristic. The greater the importance the greater the experienced satisfaction at no discrepancy and the more rapidly satisfaction decreases as the discrepancy increases. Typical graphs of the relationship between satisfaction and the perceived discrepancy at different importances are shown in Figure II-3 presented in the previous chapter.

The Amount Model - The schematic display in Figure III-2 describes an alternative to the discrepancy model. While the amount model is not identified with any single theorist or investigator, it does reflect the implicit theoretical assumptions of "environmental" studies, such as that reported by Turner and Lawrence,⁵ and unlimited need formulations

⁴Locke, "What is Job Satisfaction?", pp. 309-336.

⁵Turner and Lawrence, Industrial Jobs and the Worker, p. 14.



FIGURE III-2

THE AMOUNT MODEL IN ABBREVIATED FORM

such as Morse's.⁶ The amount model yields predictions similar to those obtained from Vroom's⁷ formulation of the job characteristic-satisfaction relationship, but differs from Vroom's proposition that relevant job characteristics are perceived in terms of the relative frequency of occurrence of certain desirable outcomes.

The process leading to experienced satisfaction is shown by the arrows connecting the variables in Figure III-2. (1) The job characteristic is perceived and its amount is judged or estimated. This cognitive judgement directly gives rise (2) to an experienced state of satisfaction with an intensity related to both the perceived amount and the importance of the characteristic.

In contrast to the discrepancy model, the amount model includes fewer explicit variables, omitting the preferred amount and hence the perceived discrepancy, and appears to suggest a less complex interrelationship of personality variables in the process leading to satisfaction. However, the model does not specify the direction of the satisfaction-amount relationship. Whether a positive or negative relationship may be expected depends on whether greater or lesser amounts of the characteristic in question are what Vroom⁸ describes as desirable outcomes. Thus, although the amount model is structurally less complex, as a predictor of satisfaction it requires the same number of information inputs to

⁶Morse, Satisfactions in the White Collar Job, pp. 27-39.

⁷Vroom, Work and Motivation, pp. 14-19.

⁸Ibid., p. 124.

fully describe the anticipated relationship as does the discrepancy model.

The Research Hypotheses

The questions posed at the end of Chapter II specify the relationships to be investigated in this study. The first question was, "Is there a consistent negative association between satisfaction and the discrepancy of the perceived amount from the amount of a job characteristic an individual would prefer to have; or, alternatively, does satisfaction consistently vary with the perceived amount of the characteristic in question?" The main variables in regard to this question are satisfaction, discrepancy and perceived amount.

The discrepancy model suggests an affirmative answer to the first part of the question while the amount model predicts a positive reply to the second part of the question. Hypotheses Ia and Ib are alternative statements of the expected relationships between the variables.

Hypothesis Ia - There is a consistent negative relationship between satisfaction and discrepancy for a given job characteristic.

Hypothesis Ia derives from the discrepancy model, and in support of the hypothesis are the experimental and survey research findings of Edwin Locke⁹. Locke's findings are discussed in the previous chapter.

Hypothesis Ib - There is a consistent relationship between satisfaction and the perceived amount for a given job characteristic.

⁹Locke, "What is Job Satisfaction?", pp. 324-326.

Empirical support for this hypothesis is mixed and not as consistent as for the satisfaction-discrepancy relationship. Dealing with survey findings for specific "desirable" job characteristics, Morse¹⁰ found a positive relationship between an individual's perception of a greater chance of being promoted and his satisfaction with promotional opportunities, but does not report a measure of the strength of the relationship. Vroom¹¹ reports a positive correlations as high as $r = .55$ between the perceived extent of participation in decision making and satisfaction with the job. Locke¹² reports mean correlations between perceived amount and satisfaction of $r = .51$ and $r = .50$ for two studies in which the relationship was examined for 10 and 25 job characteristics respectively. Using an index intended to measure the perceived amount of eight "desirable" job characteristics taken together (PTA index), Turner and Lawrence¹³ found a significant association between PTA scores and overall job satisfaction by the Chi-square test, but do not report a measure of correlation between the variables.

The second question posed at the end of Chapter II was, "Is the strength of the satisfaction-discrepancy relationship, or alternatively, the strength of the satisfaction-amount relationship, greater among individuals who perceive a job characteristic as having a high affective significance (or valence, or importance) than it is among individuals who

¹⁰Morse, Satisfactions in the White Collar Job, pp. 27-39.

¹¹Vroom, Work and Motivation, p. 165.

¹²Locke, "What is Job Satisfaction?", pp. 324-326.

¹³Turner and Lawrence, Industrial Jobs and the Worker, p. 56.

perceive the characteristic as having a low affective significance?' This question inquires as to the mediating effect of the variable importance on the relationships anticipated in Hypotheses Ia and Ib. Both of the alternative models make similar predictions regarding the effect of importance, and Hypotheses IIa and IIb reflect these predictions.

From the discrepancy model:

Hypothesis IIa - There is a stronger negative relationship between satisfaction and discrepancy for individuals perceiving a high importance than for individuals perceiving a low importance for a job characteristic.

From the amount model:

Hypothesis IIb - There is a stronger relationship between satisfaction and perceived amount for individuals perceiving a high importance than for individuals perceiving a low importance for a job characteristic.

In support of Hypothesis IIa, Locke¹⁴ found that for subjects who felt it more important to succeed on paid trials, a plot of mean satisfaction versus discrepancy on a reaction time task had a significantly steeper slope for the higher importance condition than for the lower importance condition. Locke does not, however, report any investigation of the effect of importance for intersubject comparisons using survey data.

¹⁴Locke, "What is Job Satisfaction?", p. 329.

Hypothesis IIb is a statement of what Vroom¹⁵ describes as the multiplicative effect of valence, and in support of this hypothesis is Vroom's finding that the correlations between perceived extent of participation in decision making and job satisfaction were $r = .55$, $.31$ and $.13$ for individuals high, moderate, and low, respectively, in the need for independence. Morse's¹⁶ plots of mean satisfaction scores versus promotion opportunity at different importance levels similarly tends to support Hypothesis IIb, as the slopes of the plots are seen to become progressively steeper as importance increases.

Empirical testing of Hypotheses Ia and IIa, and Hypotheses Ib and IIb will provide direct tests of the discrepancy and amount models respectively. Through a comparison of the significance, consistency, and differences in the strength of observed relationships for the same set of job characteristics, conclusions may be drawn regarding the relative superiority of one model over the other as a predictor of satisfaction.

The last question posed at the end of Chapter II was, "Does indifference to the amount of a job characteristic lead to a neutral emotional reaction, or is indifference accompanied by a chronic condition of either satisfaction or dissatisfaction with the characteristic?" If it can be established from the testing of Hypotheses IIa and IIb that individuals assigning a low importance to a job characteristic experience

¹⁵Vroom, Work and Motivation, p. 165.

¹⁶Morse, Satisfactions in the White Collar Job, p. 38.

little or no change in satisfaction as discrepancy or the perceived amount varies, the question remains as to whether this group tends to score above, below, or at the neutral point on the satisfaction scale.

From the discrepancy model, an answer to this last question is provided and a full specification of the nature of the satisfaction-discrepancy relationship is completed, by the following hypothesis.

Hypothesis III - As importance decreases, satisfaction will tend to approach neutrality, neither satisfied nor dissatisfied, for the limiting case of no discrepancy. In the case of no discrepancy, individuals perceiving a high importance will have greater satisfaction than individuals perceiving low importance for a characteristic.

Support for Hypothesis III is provided by Locke's¹⁷ previously referenced plot of mean satisfaction versus discrepancy for high and low importance conditions on a reaction time task. Not only did Locke's obtained function for the high importance condition have a steeper negative slope, but it also intersected the obtained function for the low importance condition in a fashion suggesting that at no discrepancy higher importance is accompanied by greater satisfaction.

For the amount model, it is predicted that a condition of indifference or zero valence will similarly be accompanied by a neutral response no matter what amount of the characteristic is perceived. Vroom¹⁸ found the relationship between need for independence (valence or

¹⁷Locke, "What is Job Satisfaction?", p. 329.

¹⁸Vroom, Work and Motivation, p. 165.

importance) and job satisfaction varied from negative under conditions of low participation to positive for high participation in decision making. In the context of the present study, any attempt to replicate Vroom's analysis presents a serious methodological problem in that the findings may support the hypothesis but cannot refute the hypothesis. The failure to observe a relationship between satisfaction and importance at either the largest or smallest amount of a characteristic described in an item may simply imply that the range of the scale employed does not extend to that region where the hypothesized relationship does in fact occur. No similar problem arises with the discrepancy model since the condition of no discrepancy provides an absolute datum for the measurement of discrepancy.

Research Method, Sample and Setting

The research hypotheses were empirically tested through field research using the correlational method. The research site was a large government owned utility company operating in Western Canada, and the population studied consisted of office workers in a city of approximately 400,000 people. The company was investigating the effects of job characteristics on employee morale, and the researcher's involvement in this investigation provided the opportunity to carry out the present study. Complete support for the study was given by company management and all supervisors and employees involved agreed to participate.

The survey sample was restricted to individuals in non-supervisory positions engaged in tasks directly involved in the work

flow. A number of auxiliary and staff positions, such as secretaries to supervisors and methods analysts were thus excluded from the sample. To obtain as wide as possible a spectrum of job characteristics, the sample was drawn from sixteen separate work groups in two departments. The task functions represented in the sample included engineering design, specification writing, project scheduling and financial analysis.

A sample of 86 persons, selected on a random stratified basis, was chosen for data collection purposes. The fifteen female and 71 male employees constituting the sample ranged from 18 to 55 years in age, with the median age between 26 and 30 years and 69% between 21 and 40 years. Broken down by job title, the sample consisted of 15 clerks, 61 technicians and 10 engineers. Roughly 21% of the sample had attended university, another 20% had only high school education, while the remaining 59% had received vocational training through trade apprenticeship, technical school and business school.

The company made a classroom available and gave employees time off from work to complete the questionnaires. The questionnaires were given in a series of sittings over a four week period, with a group of 12 to 15 persons in each sitting. Completed questionnaires were obtained for all 86 persons in the sample.

Statistical Procedures

The first four research hypotheses refer to the relationships between satisfaction and other variables in the research models. The questionnaire item scales and the scoring procedures by their very nature provide measurements on an ordinal scale; and the appropriate

techniques of inference are non-parametric statistical tests.¹⁹ The findings of previous studies, which this study in part replicates and to which it is desired to compare the present findings, have been reported in terms of Pearson product-moment correlation coefficients. To facilitate the desired comparisons, therefore, the findings of the present study will similarly be reported and analysed in terms of the Pearson correlation coefficient whenever the strength of association between variables is being examined.

A further justification for the use of Pearson correlations as measures of association, albeit an intuitive one, is provided by the observation that very good agreement was obtained between Pearson correlations and Spearman rank-order correlations for the same data. This agreement was evident both in the magnitude and the relative rankings of the coefficients obtained by the alternative techniques. Spearman coefficients for the relationships examined in the analysis are included as a supplement to the findings in Appendix II, and will be individually referenced in the subsequent discussion of the findings.

In analysing the findings for Hypothesis III, the only available technique which made maximum use of the limited data available was least squares linear regression. This technique assumes not only measurements on an interval scale but also a linear association between the variables. These assumptions and the limitations they place on inferences from the findings will be discussed in Chapter VI.

Levels of significance, where reported, are in all instances

¹⁹Siegel, Nonparametric Statistics for the Behavioral Sciences, p. 25.

derived from one-tailed statistical tests.

Because the study is concerned with comparing alternative theoretical models as explanatory and predictive devices, the relative overall consistency and magnitudes of relationships are perhaps as important to the drawing of conclusions as are levels of statistical significance for individual findings. To provide a measure of consistency among findings for a particular model, the Kendall coefficient of concordance, a non-parametric statistic, has been employed.

In all instances the data have been analysed on an inter-respondent basis, with a particular job characteristic as the primary unit of analysis. Findings were averaged or compared across characteristics to provide a summary indication of the consistency and predictive power of a theoretical model. An alternative method of analysis, not employed in this study, would have been to first analyse the hypothesized relationships on an inter-characteristic or intra-respondent basis, and then to compute measures of consistency or central tendency across individuals.

CHAPTER IV

THE SATISFACTION-DISCREPANCY AND SATISFACTION-AMOUNT RELATIONSHIPS

The question addressed in this chapter, "Is there a consistent negative association between satisfaction and the discrepancy of the perceived amount from the amount of a job characteristic an individual would prefer to have; or, alternatively, does satisfaction consistently vary with the perceived amount of the characteristic in question?", inquiries as to which of two alternative formulations better describes the psychological processes linking environmental job characteristics to experienced satisfaction or dissatisfaction. This question highlights the fundamental difference between the discrepancy and amount models proposed in Chapter III. Respectively, the models suggest that satisfaction is associated with the discrepancy in perceived from preferred amounts, and that satisfaction is associated only with the perceived amount.

The hypothesized relationships derived from the alternative models will first be examined separately, and the results will then be compared to assess the relative explanatory powers of the two models.

The Satisfaction-Discrepancy Relationship

Hypothesis 1a states there is a consistent negative relationship between satisfaction and discrepancy for a given job characteristic.

Table IV-1 presents the results, reported as Pearson correla-

tions, for each of the 37 job characteristics. The corresponding Spearman correlations are shown in Table AII-1 in the appendix. All satisfaction-discrepancy correlations are negative as hypothesized, with 34 of the 37 coefficients significant at the .001 level. The average Pearson correlation over the 37 items is $-.57$, with individual coefficients ranging from $-.15$ to $-.75$.

The three lowest correlations are $-.30$ ($p = .003$) for Item 14, minimum experience and education required; $-.15$ ($p = .092$) for Item 30, additional optional interactions; and $-.25$ ($p = .011$) for Item 36, pay to required pay. The Spearman correlations for Items 14 and 36 respectively are $-.40$ ($p = .001$) and $-.38$ ($p = .001$) indicating that for these characteristics there is a highly significant association between satisfaction and discrepancy, but an association which tends to appear curvilinear under the assumption of interval scale measurement. In the case of Item 30 the wording of the questionnaire item may in part account for the weaker association between the variables. Item 30 refers to the number of persons available for optional interactions in addition to the persons who are necessary contacts as described in Item 28. Perhaps a reference to the number of persons available for optional contact, including those who may also be necessary contacts, would be a more meaningful wording for this characteristic.

The average Pearson correlation of $-.57$ over the 37 items can be compared with the averages of $-.81$ and $-.72$, for 10 and 25 job characteristics respectively, reported by Locke¹ for the satisfaction-

¹Locke, "What is Job Satisfaction?", pp. 324-325.

TABLE IV-1

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR ALL JOB
CHARACTERISTICS-PEARSON CORRELATIONS

Item Number and Description	Number Of Cases	Pearson Correlation	Significance Level
1. Physical Location	84	-.51	.001
2. Change of scene	83	-.75	.001
3. Different major operations	82	-.71	.001
4. Kinds of assignments	84	-.70	.001
5. Jobs at one time	85	-.64	.001
6. Elapsed time for job	85	-.41	.001
7. Choice of methods	86	-.63	.001
8. Choice of sequence	84	-.65	.001
9. Choice of pace	84	-.52	.001
10. Regulate input quality	83	-.54	.001
11. Peer contact choice	84	-.67	.001
12. Public contact choice	82	-.48	.001
13. Weekly housekeeping	86	-.67	.001
14. Minimum experience	81	-.30	.003
15. Courses available	81	-.60	.001
16. Learning on job	83	-.73	.001
17. Complexity of choices	83	-.61	.001
18. Span of discretion	85	-.44	.001
19. Chance of serious error	85	-.47	.001
(CONTINUED)			

TABLE IV-1 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR ALL JOB
CHARACTERISTICS-PEARSON CORRELATIONS

Item Number and Description	Number Of Cases	Pearson Correlation	Significance Level
20. Clarify of start-finish	85	-.39	.001
21. Own output visibility	84	-.73	.001
22. Implementation visibility	84	-.57	.001
23. Consequence visibility	84	-.67	.001
24. Performance visibility	86	-.63	.001
25. Visibility in product	85	-.64	.001
26. Contribution originality	81	-.60	.001
27. Critical to work-flow	86	-.68	.001
28. Required contacts	84	-.50	.001
29. Required contact time	83	-.57	.001
30. Extra optional contacts	82	-.15	.092
31. Optional contact time	83	-.72	.001
32. Approach others	84	-.49	.001
33. Give help in contacts	84	-.72	.001
34. Technical advancement	83	-.63	.001
35. Supervisory advancement	86	-.66	.001
36. Pay to required pay	82	-.25	.011
37. Occupational prestige	79	-.57	.001
Average correlation over 37 items.		-.57	

discrepancy relationship. Although the average correlation from the present study is lower than Locke's reported average, in none of these instances is importance controlled, and the difference in coefficients may possibly be explained in terms of this additional variable. This possibility will be explained further in Chapter V.

The Satisfaction-Amount Relationship

Hypothesis Ib states there is a consistent relationship between satisfaction and the perceived amount for a given job characteristic.

The results for Hypothesis Ib are presented in Table IV-2. Pearson correlations are reported for each of 36 job characteristics. Since Item 36 measures the amount of pay relative to the individual's minimum requirement rather than the absolute amount of pay, the satisfaction-amount relationship cannot be examined for this item. Spearman correlations for the same set of items are given in Table AII-2, Appendix II. Referring to Table IV-2, it may be noted that the reported correlations have both positive and negative signs. The hypothesis makes no prediction as to the direction of the satisfaction-amount relationship and the responses have been scored simply according to the sequence in which they appear on the item scales. The results will be discussed, therefore, in terms of their absolute value.

Of the 36 Pearson correlations for the satisfaction-amount relationship, 19 are significant at the .001 level, another 10 are significant between the .001 and the .05 levels, while the remaining 7 are not significant at .05. A similar subdivision of the Spearman correlations for the same relationships yields 19 significant at the .001 level, only 5

TABLE IV-2

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR ALL JOB
CHARACTERISTICS-PEARSON CORRELATIONS

Item Number and Description	Number Of Cases	Pearson Correlation	Significance Level
1. Physical location	86	.13	.112
2. Change of scene	86	.33	.001
3. Different major operations	86	-.03	.405
4. Kinds of assignments	85	.21	.024
5. Jobs at one time	86	-.30	.002
6. Elapsed time for job	86	-.13	.108
7. Choice of methods	86	.21	.026
8. Choice of sequence	85	.43	.001
9. Choice of pace	86	.38	.001
10. Regulate input quality	85	.24	.014
11. Peer contact choice	85	.40	.001
12. Public contact choice	83	.28	.005
13. Weekly housekeeping	86	-.41	.001
14. Minimum experience	84	.08	.236
15. Courses available	82	.50	.001
16. Learning on job	84	.61	.001
17. Complexity of choices	85	-.21	.022
18. Span of discretion	85	-.40	.001
19. Chance of serious error	85	.18	.049

(CONTINUED)

TABLE IV-2 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR ALL JOB
CHARACTERISTICS-PEARSON CORRELATIONS

Item Number and Description	Number of Cases	Pearson Correlation	Significance Level
20. Clarify of start-finish	86	.25	.009
21. Own output visibility	84	.64	.001
22. Implementation visibility	85	.55	.001
23. Consequence visibility	85	.58	.001
24. Performance visibility	86	.61	.001
25. Visibility in product	85	.55	.001
26. Contribution originality	84	.42	.001
27. Critical to work-flow	86	.57	.001
28. Required contacts	85	.14	.094
29. Required contact time	84	.06	.303
30. Extra optional contacts	83	-.18	.053
31. Optional contact time	84	-.23	.017
32. Approach others	84	-.31	.002
33. Give help in contacts	85	.54	.001
34. Technical advancement	84	-.47	.001
35. Supervisory advancement	86	-.54	.001
36. Pay to required pay	--	--	--
37. Occupational prestige	79	-.50	.001
Average absolute correlation over 36 items		.35	

significant between the .001 and .05 levels, and 12 not significant at .05. The low correlations in Table IV-2 can hence be confidently interpreted as indicative of a weak association between variables and not simply a reflection of an inappropriate statistical technique.

The individual correlations in Table IV-2 range from .03 to .69. The average Pearson correlation over 36 items for the satisfaction-amount relationship is .35. This average is lower than the values of .51 and .50, averaged over 10 and 25 job characteristics respectively, reported for similar studies by Locke.² As noted above in discussing the results for the satisfaction-discrepancy relationship, these average correlations do not reflect any controls for importance, and a possible reconciliation with Locke's findings by considering this additional variable will be discussed in Chapter V.

Comparison of the Discrepancy and Amount Models

From a comparison of the number of significant relationships and the average size of correlations obtained for the two models, as shown in Table IV-3, the discrepancy model appears to be a better overall predictor of satisfaction. The relationships in the amount model are less likely to be significant, and on the average this model yields a substantially lower correlation coefficient than does the discrepancy model for the same set of job characteristics examined in a given population.

Such an over-all comparison of the two models, however, may be

²Ibid.

TABLE IV-3

SUMMARY COMPARISON OF STRENGTHS OF SATISFACTION-DISCREPANCY AND
SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS

Measures Compared	Satisfaction -Discrepancy Relationship	Satisfaction -Amount Relationship
Number of Pearson Correlations significant at:		
.001 level or less	34	19
between .001 and .05	2	10
not sig. at .05	1	7
	—	—
Total number of job character- istics	<u>37</u>	<u>36</u>
Average correlation over all characteristics	-.57	.35

misleading. Even though the satisfaction-discrepancy relationship is stronger on average than the satisfaction amount relationship, there may be certain job characteristics for which the amount model is the superior predictor. Hence a comparison of the strength of relationships must be made on an item by item basis. In making such a comparison, it is desirable to test the observed difference in correlations for statistical significance.

An item by item comparison of the strengths of the satisfaction-discrepancy and satisfaction-amount relationships is presented in Table IV-4. The significance of the differences in Pearson correlations was determined using an adaptation of the test for comparing correlations in two bivariate populations.³ The test requires that the correlations compared be observed in independent samples. Clearly the correlation measures obtained for each of the alternative models in the total sample do not satisfy the condition of independence, since the same set of satisfaction scores is used in deriving the coefficients in both instances. To meet the independence condition, the sample was randomly partitioned to yield two samples of equal size and correlations for the satisfaction-discrepancy and satisfaction-amount relationships were computed for the partitioned samples. Thus, for each job characteristic two independent comparisons of the strength of relationships are made, or a total of 72 comparisons for the 36 job characteristics studied. The comparisons in Table IV-4 ignore the sign of the correlation coefficients since the strength of relationships, not the direction, is of concern.

³D. F. Morrison, Multivariate Statistical Methods (New York: McGraw-Hill Book Company, 1967), p. 102.

TABLE IV-4

ITEM BY ITEM COMPARISON OF STRENGTHS OF SATISFACTION-DISCREPANCY AND
SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS

Number	<u>Discrepancy</u>		<u>Amount</u>		Difference in Absolute r (1) - (2)
	(1) r	No. of Cases	(2) r	No. of Cases	
1.	-.521	43	-.036	43	.557***
	-.468	41	.180	43	.288*
2.	-.725	41	.280	43	.445***
	-.773	42	.392	43	.381***
3.	-.651	39	-.313	43	.964***
	-.748	43	.344	43	.404***
4.	-.737	42	.238	42	.499***
	-.648	42	.205	43	.443***
5.	-.623	42	-.176	43	.447***
	-.667	43	-.359	43	.308**
6.	-.305	43	-.239	43	.066
	-.614	42	-.036	43	.578***
7.	-.623	43	.484	43	.139
	-.623	43	-.010	43	.633***
8.	-.609	41	.453	43	.156
	-.681	43	.419	42	.262
9.	-.471	41	.411	43	.060
	-.559	43	.347	43	.212
10.	-.459	40	.002	43	.457**
	-.602	43	.450	42	.152
11.	-.479	41	.478	43	.001
	-.788	43	.319	42	.469***

(CONTINUED)

*p < .10, **p < .05, ***p < .01.

TABLE IV-4 (CONTINUED)

ITEM BY ITEM COMPARISON OF STRENGTHS OF SATISFACTION-DISCREPANCY AND SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS

Number	<u>Discrepancy</u>		<u>Amount</u>		Difference in Absolute r (1) - (2)
	(1) r	No. of Cases	(2) r	No. of Cases	
12.	-.366	41	.404	41	(.038)
	-.562	41	.150	42	.412**
13.	-.600	43	-.468	43	.132
	-.733	43	-.327	43	.406***
14.	-.438	41	.012	41	.326*
	-.160	40	-.140	43	.300*
15.	-.579	40	.521	41	.058
	-.655	40	.498	41	.157
16.	-.732	42	.551	41	.181*
	-.734	41	.655	43	.079
17.	-.627	40	-.128	43	.499***
	-.587	43	-.322	42	.265*
18.	-.248	42	-.588	43	(.340)**
	-.572	43	-.213	42	.359**
19.	-.435	43	.158	42	.277*
	-.522	42	.222	43	.300*
20.	-.356	43	.084	43	.272*
	-.413	42	.429	43	(.016)
21.	-.732	43	.697	41	.035
	-.734	41	.615	43	.119
22.	-.602	42	.437	42	.165
	-.535	42	.649	43	(.114)

(CONTINUED)

*p < .10, **p < .05, ***p < .01.

TABLE IV-4 (CONTINUED)

ITEM BY ITEM COMPARISON OF STRENGTHS OF SATISFACTION-DISCREPANCY AND SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS

Number	<u>Discrepancy</u>		<u>Amount</u>		Difference in Absolute r (1) - (2)
	(1) r	No. of Cases	(2) r	No. of Cases	
23.	-.602	43	.563	42	.039
	-.719	41	.563	43	.156
24.	-.575	43	.627	43	(.052)
	-.694	43	.598	43	.096
25.	-.617	42	.640	43	(.023)
	-.679	43	.445	42	.234*
26.	-.652	39	.352	43	.300**
	-.542	42	.510	41	.032
27.	-.687	43	.557	43	.130
	-.684	43	.583	43	.101
28.	-.313	41	.081	43	.232
	-.582	43	.199	42	.383**
29.	-.370	41	-.037	42	.407**
	-.733	42	+.155	42	.578***
30.	-.260	41	-.171	41	.089
	-.015	41	-.182	42	(.167)
31.	-.715	41	-.364	42	.351**
	-.743	42	-.022	42	.721***
32.	-.459	42	-.248	42	.211*
	-.518	42	-.390	42	.128
33.	-.685	43	.444	42	.241*
	-.768	41	.649	43	.119

(CONTINUED)

*p < .10, **p < .05, ***p < .01.

TABLE IV-4 (CONTINUED)

ITEM BY ITEM COMPARISON OF STRENGTHS OF SATISFACTION-DISCREPANCY AND SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS

Number	<u>Discrepancy</u>		<u>Amount</u>		Difference in Absolute r (1) - (2)
	(1) r	No. of Cases	(2) r	No. of Cases	
34.	-.456	42	-.561	42	(.105)
	-.780	41	-.362	42	.418***
35.	-.568	43	-.524	43	.044
	-.723	43	-.543	43	.180*
36.	-.468	41	-.495	38	(.027)
	-.699	38	-.511	41	.188*

*p < .10, **p < .05, ***p < .01.

Table IV-5 summarizes the results from Table IV-4, and shows the number of comparisons favoring each of the alternative models at various levels of statistical significance. Referring to Tables IV-4 and IV-5, only 9 of the 72 comparisons indicate a higher correlation for the amount model. In each of the 9 instances where the amount model is favored, a second comparison favors the discrepancy model, significantly so in 6 of the 9 instances. Thus, there is no single characteristic for which the amount model emerges as a clearly superior predictor of satisfaction, while for 27 of the 36 characteristics examined the discrepancy model yields consistently higher correlations.

Summary and Discussion

The results obtained provide support for both Hypothesis Ia and Ib, derived from the discrepancy model and the amount model respectively. The strengths of the observed satisfaction-discrepancy relationships, however are greater than the strengths of the satisfaction-amount relationships for the job characteristics studied. From comparisons of the relative numbers of significant correlations and of the magnitudes of the respective correlation coefficients, both on the average and for any single job characteristic, the discrepancy in the perceived from the preferred amount of a job characteristic emerges as a better predictor of satisfaction than the perceived amount by itself.

The results presented in this chapter replicate the findings of two survey studies reported by Locke. A comparison with Locke's findings is shown in Table IV-6. Referring to the table, the average

TABLE IV-5

SUMMARY OF ITEM BY ITEM COMPARISON OF DISCREPANCY
AND AMOUNT RELATIONSHIP

Significance Level	Number of Comparisons with Greater Correlation for:	
	Discrepancy	Amount
$p < .01$	16	-
$.05 > p > .01$	8	1
$.10 > p > .05$	13	-
$p > .10$	26	8
Total Number	<u>63</u>	<u>9</u>

TABLE IV-6

COMPARISON OF PRESENT STUDY WITH FINDINGS REPORTED BY LOCKE*

Description of Study	Average Correlation (r)	
	Satisfaction -Discrepancy	Satisfaction -Amount
Present study, N = 86, 36 characteristics	-.57	.35
Locke, N = 72, 10 characteristics	-.81	.51
Locke, N = 72, 25 characteristics	-.72	.50

*Locke, "What is Job Satisfaction?", pp. 324-325.

correlations for both models are lower than the respective values observed by Locke, but there is good agreement with Locke's findings when the relative strengths of relationships are compared between models. The effect of importance on the strength of relationships for both models may possibly explain the lower average correlations in the present findings, and this possibility will be discussed in Chapter V.

CHAPTER V

THE EFFECT OF IMPORTANCE ON STRENGTHS OF RELATIONSHIPS

The findings presented in Chapter IV indicate empirical support for both the discrepancy and amount models as descriptions of the process linking environmental job characteristics to satisfaction, with perceived discrepancy emerging as a better predictor of satisfaction than the perceived amount. The research models predict that the strengths of the relationships examined in Chapter IV will be influenced by the variable importance. This chapter examines the effect of importance on the strengths of the satisfaction-discrepancy and satisfaction-perceived amount relationships.

The results will first be reported separately for the hypotheses concerning the effect of importance derived from each of the alternative research models. The findings for the two models will then be compared in terms of consistency as well as the relative strengths of relationships. No attempt will be made to discuss the findings in regard to individual job characteristics since the basic concern in this chapter is with the pattern of results for each of the alternative research models.

To test Hypotheses IIa and IIb the survey sample was partitioned into three groups for each job characteristic on the basis of the questionnaire responses indicating how important a reason for being satisfied or dissatisfied in one's job the characteristic in question is. The three groups will be referred to as the high, moderate and low importance groups, describing individuals who perceived the characteristic as very

important, fairly important, and slightly or not at all important, respectively.

The Effect of Importance on the Satisfaction-Discrepancy Relationship

Hypothesis IIa states there is a stronger negative relationship between satisfaction and discrepancy for individuals perceiving a high importance than for individuals perceiving a low importance for a job characteristic.

From Hypothesis IIa it is predicted the correlation between satisfaction and discrepancy will decrease from the high importance to the moderate importance groups. The first research model presented in Chapter III suggests that for the low importance group the correlation will approach zero, with little or no relationship between discrepancy and satisfaction. Findings consistent with these predictions will provide support for the discrepancy model.

The results in regard to Hypothesis IIa are presented as Pearson correlation coefficients in Table V-1. Table AII-3 gives the corresponding Spearman rank-order correlations. Referring to Table V-1, for 27 of the 37 job characteristics the correlations are as hypothesized, with the strongest relationship between satisfaction and discrepancy for the high importance group and the weakest relationship for the low importance group. Of the ten instances where the relative magnitudes are not as predicted, only three characteristics have a higher correlation for the low importance group than for the high importance group, while for the seven remaining instances results consistent with

TABLE V-1

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-PEARSON CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	r	No. of Cases	r	No. of Cases	r
1.	20	-.79	40	-.46	24	-.41
2.	21	-.78	38	-.78	24	-.61
3.	27	-.82	37	-.71	18	-.55
4.	29	-.90	36	-.64	19	-.36
5.	24	-.86	39	-.62	22	-.43
6.	20	-.89	27	-.65	38	-.23
7.	30	-.76	36	-.66	20	-.06
8.	17	-.71	35	-.61	32	-.60
9.	25	-.82	32	-.55	27	-.14
10.	28	-.51	39	-.59	16	-.54
11.	16	-.75	30	-.61	28	-.64
12.	13	-.90	27	-.59	42	-.27
13.	19	-.68	31	-.65	36	-.70
14.	25	-.66	27	-.38	29	-.70
15.	32	-.70	38	-.53	10	-.38
16.	35	-.80	30	-.72	18	-.56
17.	28	-.74	44	-.60	11	-.51

(CONTINUED)

TABLE V-1 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-PEARSON CORRELATIONS

Item Number	High <u>Importance</u>		Moderate <u>Importance</u>		Low <u>Importance</u>	
	No. of Cases	r	No. of Cases	r	No. of Cases	r
18.	35	-.80	30	-.72	18	-.56
19.	34	-.42	35	-.62	16	-.30
20.	25	-.77	35	-.50	25	-.05
21.	36	-.82	35	-.75	13	-.40
22.	33	-.69	36	-.70	15	+.30
23.	19	-.92	36	-.70	29	-.30
24.	30	-.81	38	-.70	18	-.02
25.	33	-.89	25	-.56	27	-.28
26.	28	-.76	32	-.50	21	-.48
27.	34	-.89	27	-.53	25	-.54
28.	19	-.81	31	-.34	34	-.31
29.	18	-.82	29	-.35	36	-.51
30.	9	-.58	25	-.32	48	+.13
31.	11	-.96	30	-.55	42	-.54
32.	14	-.56	36	-.65	34	-.34
33.	24	-.97	44	-.60	16	-.23
34.	49	-.63	27	-.69	7	-.21

(CONTINUED)

TABLE V-1 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-PEARSON CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	r	No. of Cases	r	No. of Cases	r
35.	46	-.69	30	-.62	10	-.58
36.	38	-.05	35	-.56	9	-.25
37.	16	-.69	28	-.56	35	-.42
Average over 37 Items		-.74		-.58		-.34

the hypothesis may be obtained by pooling the responses of the moderate importance group either with those of the high importance or the low importance group.

Table V-2 presents the differences between the correlation coefficients of various importance levels. Two sets of comparisons are made in Table V-2, first between the high and moderate importance groups and second between the moderate and low importance groups for each job characteristic. The correlations for the high importance group exceed those for the moderate importance group at the .05 significance level in 13 instances and the moderate importance group has a significantly higher correlation only in the case of Item 36, the item dealing with pay and benefits. Turning to the second set of comparisons, the moderate importance group has a higher correlation than the low importance group at the .05 level of significance for 9 of the 37 characteristics.

The determination of significant differences through two unrelated sets of comparisons as shown in Table V-2 is not an entirely satisfactory test. It would be preferable to test the null hypothesis that the three independent correlations were drawn from a single population. Bearing this limitation in mind, however, the comparisons made do provide a useful indication of the direction of the relationships observed and serve as a common basis for comparison with findings for the amount model.

Returning to the overall direction of the findings presented in Table V-1, the mean Pearson correlations between satisfaction and discrepancy for the 37 characteristics are $-.74$, $-.58$ and $-.34$ for the high, moderate and low importance groups respectively indicating overall

TABLE V-2

DIFFERENCES IN STRENGTHS OF SATISFACTION-DISCREPANCY RELATIONSHIPS
BETWEEN IMPORTANCE LEVELS

Item Number	<u>Difference in r's in Predicted Direction</u>	
	Between High and Moderate Importance	Between Moderate and Low Importance
1.	.33*	.05
2.	.00	.17
3.	.11	.16
4.	.26***	.28
5.	.24*	.19
6.	.24*	.42*
7.	.10	.60**
8.	.10	.01
9.	.27*	.41*
10.	-.08	.05
11.	.14	-.03
12.	.31*	.32
13.	.03	-.05
14.	.28	.45*
15.	.17	.15
16.	.08	.16

(CONTINUED)

*p < .05, **p < .01, ***p < .005.

TABLE V-2 (CONTINUED)

DIFFERENCES IN STRENGTHS OF SATISFACTION-DISCREPANCY RELATIONSHIPS
BETWEEN IMPORTANCE LEVELS

Item Number	<u>Difference in r's in Predicted Direction</u>	
	Between High and Moderate Importance	Between Moderate and Low Importance
17.	.14	.09
18.	.24	.38
19.	-.20	.32
20.	.27*	.45*
21.	.07	.35
22.	-.01	.84***
23.	.22	.40*
24.	.11	.68***
25.	.33***	.28
26.	.26	.02
27.	.36***	-.01
28.	.47**	.03
29.	.49**	-.16
30.	.26	.45*
31.	.41***	.01
32.	-.09	.31

(CONTINUED)

*p < .05, **p < .01, ***p < .005.

TABLE V-2 (CONTINUED)

DIFFERENCES IN STRENGTHS OF SATISFACTION-DISCREPANCY RELATIONSHIPS
BETWEEN IMPORTANCE LEVELS

Item Number	<u>Difference in r's in Predicted Direction</u>	
	Between High and Moderate Importance	Between Moderate and Low Importance
33.	.37***	.37
34.	-.06	.48
35.	.07	.04
36.	-.51**	.31
37.	.13	.14

*p < .05, **p < .01, ***p < .005.

support for Hypothesis IIa. To obtain a summary measure of the consistency of the findings, the Kendall coefficient of concordance, W , was computed for the results in Table V-1. Kendall's W is a measure of the degree of agreement among independent rankings, and varies from zero, for no agreement, to unity, for complete agreement. Siegal¹ indicates that W bears a linear relationship to the average value of the Spearman rank correlation coefficients between all possible pairs of rankings. To compute W the three Pearson correlations for each of the 37 job characteristics were ranked from highest to lowest without regard to the significance of differences between coefficients. Summary rankings obtained in this fashion place the high importance group first and the low importance group last, consistent with Hypothesis IIa, and yield a value of $W = .62$, significant at the .01 level.

The Effect of Importance on the Satisfaction-Perceived Amount Relationship

For the amount model, the predicted effect of importance is described by Hypothesis IIb which states there is a stronger relationship between satisfaction and perceived amount for individuals perceiving a high importance than for individuals perceiving a low importance for a job characteristic.

Hypothesis IIb suggests the highest correlation between satisfaction and amount will be observed for the high importance group and the lowest correlation for the low importance group. The second research model presented in Chapter III further suggest that this correlation will

¹Siegel, Nonparametric Statistics for the Behavioral Sciences, p. 229.

approach zero as importance diminishes, implying little or no change in the level of satisfaction as the perceived amount varies for individuals who attach little or no affective significance to a job characteristic.

Table V-3 presents the results in regard to Hypothesis IIb. The Pearson correlations between satisfaction and perceived amount at three levels of importance are given for each of the 36 job characteristics for which the hypothesized relationship could be examined. The corresponding Spearman rank correlations are presented in the Appendix, Table AII-4. For only 14 of the 36 characteristics are the results shown in Table V-3 completely consistent with the hypothesis. Of the 22 instances where the results are not consistent with Hypothesis IIb, there are 9 cases, or one-fourth of the characteristics examined, where not only the relative magnitudes of the correlations are contrary to the prediction, but also the direction of the satisfaction-amount relationship varies from one importance level to the next. As indicated in Chapter III, the model does not predict the direction of the satisfaction-amount relationship, but it is expected from the theoretical formulation that the direction of the relationship will not vary as importance varies, and the observed results for Items, 3, 6, 8, 19, 22, 28, 30, 31 and 34 are wholly inconsistent with the amount model in this respect.

To provide a comparison with the parallel analysis made for the discrepancy model, Table V-4 presents the differences in the absolute magnitudes of the Pearson satisfaction-amount correlations between the high and moderate importance groups and between the moderate and low importance groups for each characteristic. A negative difference indi-

TABLE V-3

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-PEARSON CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	r	No. of Cases	r	No. of Cases	r
1.	21	.33	41	.01	24	.17
2.	21	.39	41	.32	24	.19
3.	28	-.17	39	-.13	19	.28
4.	29	.38	37	.04	19	.13
5.	24	-.20	40	-.26	22	-.51
6.	20	-.19	28	.25	38	-.27
7.	30	.31	36	.32	20	-.27
8.	18	.37	35	.55	32	.32
9.	26	.37	33	.44	27	.43
10.	28	.20	41	.50	16	-.12
11.	27	.46	30	.48	28	.23
12.	14	.55	27	.22	42	.01
13.	19	-.37	31	-.33	36	-.51
14.	25	.13	27	.26	32	-.08
15.	33	.60	38	.43	11	.46
16.	35	.72	30	.58	19	.25

(CONTINUED)

TABLE V-3 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-PEARSON CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	r	No. of Cases	r	No. of Cases	r
17.	29	-.38	44	-.09	12	-.57
18.	21	-.73	32	-.53	32	.10
19.	34	.43	35	-.14	16	.16
20.	25	.29	36	.29	25	.00
21.	36	.82	35	.69	13	.22
22.	34	.65	36	.73	15	-.31
23.	19	.97	36	.55	30	.16
24.	30	.76	38	.69	18	-.16
25.	33	.86	25	.34	27	.27
26.	28	.59	35	.31	21	.15
27.	34	.72	27	.40	25	.34
28.	19	.13	31	-.09	35	.12
29.	18	.26	29	.08	37	-.06
30.	9	-.29	25	.11	49	-.17
31.	11	-.62	30	.14	43	-.25
32.	14	-.25	36	-.39	34	-.19

(CONTINUED)

TABLE V-3 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-PEARSON CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	r	No. of Cases	r	No. of Cases	r
33.	25	.72	44	.40	16	.44
34.	49	-.62	27	-.25	8	.26
35.	46	-.60	30	-.55	10	-.47
36.	--	--	--	--	--	--
37.	16	-.63	28	-.52	35	-.29
Average over 36 Items		.47		.30		.17

TABLE V-4

DIFFERENCES IN STRENGTHS OF SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS
BETWEEN IMPORTANCE LEVELS

Item Number	Difference in r's in Predicted Direction	
	Between High and Moderate Importance	Between Moderate and Low Importance
1.	.32	-.16
2.	.07	.13
3.	.04	-.41
4.	.34	-.09
5.	-.06	-.25
6.	.44	-.52*
7.	-.01	.59*
8.	-.18	.23
9.	-.07	.01
10.	-.30	.62*
11.	-.01	.24
12.	.33	.21
13.	.04	-.18
14.	-.13	.34
15.	.17	-.03

(CONTINUED)

*p < .05, **p < .01, ***p < .005.

TABLE V-4 (CONTINUED)

DIFFERENCES IN STRENGTHS OF SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS
BETWEEN IMPORTANCE LEVELS

Item Number	<u>Difference in r's in Predicted Direction</u>	
	Between High and Moderate Importance	Between Moderate and Low Importance
16.	.14	.33
17.	.29	-.48
18.	.20	.63*
19.	.58**	-.31
20.	.00	.29
21.	.13	.47*
22.	-.08	1.04***
23.	.41***	.39*
24.	.07	.85***
25.	.52***	.07
26.	.28	.16
27.	.32*	.06
28.	.22	-.21
29.	.19	.13
30.	.40	-.28
31.	.76*	-.39
(CONTINUED)		

*p < .05, **p < .01, ***p < .005.

TABLE V-4 (CONTINUED)

DIFFERENCES IN STRENGTHS OF SATISFACTION-PERCEIVED AMOUNT RELATIONSHIPS
BETWEEN IMPORTANCE LEVELS

Item Number	<u>Difference in r's in Predicted Direction</u>	
	Between High and Moderate Importance	Between Moderate and Low Importance
32.	-.14	.20
33.	.32*	-.04
34.	.37*	.51
35.	.05	.08
36.	----	----
37.	.11	.23

* $p < .05$, ** $p < .01$, *** $p < .005$.

cates the relative magnitudes of the coefficients compared are inconsistent with Hypothesis IIb. Referring to Table V-4, 7 of the high-moderate differences and 7 of the moderate-low differences are significant at the .05 level in the predicted direction, while one of the moderate-low differences is significant in a contrary direction. A majority of the 72 comparisons do favor the hypothesis indicating a measure of overall support for the amount model in spite of the large number of obvious inconsistencies.

Another summary indicator tending to generally support the amount model is the average Pearson correlation over the 36 characteristics at each importance level. The average correlations for the high, moderate, and low importance levels are .47, .30 and .17 respectively. In computing the averages, the absolute values of the coefficients in Table V-3 were summed except in those instances where the coefficients were inconsistent as to sign; in these latter instances the absolute value of the odd coefficient was subtracted from the aggregate in determining the mean. Finally, a third measure of the overall consistency of the findings among the 36 characteristics is provided by Kendall's W . The overall ranking places the high, moderate and low importance groups in the predicted order according to the strength of the satisfaction-amount correlation and yields $W = .28$ significant at the .01 level.

Comparison of the Discrepancy and Amount Models

Overall comparisons of the findings regarding the effect of importance for each of the alternative research models are presented in

Tables V-5 and V-6.

Table V-5 summarizes the results given in Tables V-2 and V-4 by comparing the number of instances in which the predictions made by the discrepancy model and the amount model respectively are confirmed or contradicted by a comparison of correlation coefficients first between the high and moderate importance groups and second between the moderate and low importance groups. In the tabulation no distinction is made between the two sets of differences for a given model. Referring to Table V-5, there is substantially more support for the discrepancy model than there is for the amount model, although the majority of the findings are supportive in both instances. As previously indicated, pairwise differences do not provide an entirely satisfactory technique for testing the support for the hypotheses, and it would be preferable to apply a test which simultaneously compares the three correlations observed for a particular job characteristic.

In Table V-6 a comparison is made of the average correlations at each importance level and of Kendall's W for the two models. Findings from similar studies reported by Locke and Vroom are also shown in the table. Examining the two sets of average correlations for the present study, the strengths of both the satisfaction-discrepancy and satisfaction-amount relationships are seen to increase, on average, as importance increases; however, at each importance level higher correlations are observed for the discrepancy model. The general pattern of findings indicated by the average correlations is re-inforced by the consistency with which the predicted effect of importance on the strength of relationships

TABLE V-5

COMPARISON OF DIFFERENCES IN STRENGTHS OF SATISFACTION-DISCREPANCY
AND SATISFACTION-AMOUNT RELATIONSHIPS BETWEEN IMPORTANCE LEVELS

Direction of Difference*	Satisfaction-Discrepancy		Satisfaction-Amount	
	No. of Instances	Cumulative %	Cumulative %	No. of Instances
As Predicted				
$p < .005$	7	9.5	5.5	4
$.005 < p < .01$	3	13.5	7.0	1
$.01 < p < .05$	12	29.8	19.5	9
$.05 < p$	42	86.5	69.5	36
Contrary to Prediction				
$.05 < p$	9	98.7	98.6	21
$.01 < p < .05$		98.7	100.0	1
$.005 < p < .01$	1	100.0	100.0	
$p < .005$		100.0	100.0	
<hr/>				
Total	74			72

*This refers to pairwise differences between High and Moderate Importance and Moderate and Low Importance Levels shown in Tables V-2, and V-4.

TABLE V-6

COMPARISON OF AVERAGE PEARSON CORRELATIONS AND KENDALL'S W FOR THE EFFECT OF IMPORTANCE ON THE SATISFACTION-DISCREPANCY AND SATISFACTION AMOUNT RELATIONSHIPS

Study and Statistic	Satisfaction- Discrepancy Relationship	Satisfaction- Amount Relationship
<u>Present Study - 37 Characteristics</u>		
Average Correlation		
High Importance	-.74	.47
Moderate Importance	-.58	.30
Low Importance	-.34	.17
All Cases	-.57	.35
<u>Locke*</u>		
Average Correlation		
10 characteristics - all cases	-.81	.51
25 characteristics - all cases	-.72	.50
<u>Vroom** One Characteristic</u>		
Pearson Correlation		
High N - independence	----	.55
Moderate N - independence	----	.31
Low N - independence	----	.13
<u>Present Study - 37 Characteristics</u>		
Consistency of predicted effect among characteristics		
Kendall's W	.62 (p < .01)	.28 (p < .01)

*Locke, "What is Job Satisfaction?", pp. 324-26.

**Vroom, Work and Motivation, p. 165.

is observed over a number of job characteristics for each of the alternative models. For the discrepancy model Kendall's $W = .62$ is substantially greater than $W = .28$ for the amount model.

Summary and Discussion

This chapter has been concerned with examining the effect of the variable importance on the strengths of the satisfaction-discrepancy and satisfaction-amount relationships. From the research models presented in Chapter III it was predicted that individuals perceiving lower importance for a job characteristic experience less change in satisfaction than do those perceiving a higher importance for a given change in discrepancy, or alternatively, in the perceived amount. Hypotheses IIa and IIb specified these predictions for the discrepancy and amount models respectively.

The results obtained provide general support for Hypothesis IIa. The strength of the satisfaction-discrepancy relationship is observed to progressively increase as importance varies from a low to a moderate to a high level. This variation in the strength of the relationship is evident both on an overall basis, as indicated by the average correlations at each importance level, and for individual job characteristics, as indicated by the moderately high level of consistency among the findings for the 37 items examined. From the review of the literature, it does not appear any previous investigations of the effect of importance on the satisfaction discrepancy relationship using survey data have been reported. Locke's² experimental findings dealing with satisfac-

²Locke, "What is Job Satisfaction?", pp. 326-29.

action on a reaction time task under induced conditions of high and low importance, in fact, appears to be the only evidence concerning this effect. The present findings hence represent not only a confirmation of Locke's results using a different research method, but indicate as well that the effect can be confidently generalized to satisfaction with a variety of real situations as opposed to a single aspect of relatively artificial laboratory situation.

For Hypothesis 11b, the results similarly provide a measure of general support. Average correlations between satisfaction and perceived amount are observed to increase from the low to the moderate to the high importance levels. When the correlations for individual job characteristics are considered, however, there are more instances where the overall direction of the findings is contradicted than there are items for which it is consistently supported. This lack of consistency in the findings is reflected by a relatively low coefficient of concordance among the results for the 36 job characteristics examined. The lack of consistency in the effect of importance on the satisfaction-amount relationship is observed not only in terms of the relative strengths of the relationship, but also in the direction of the relationship for one-fourth of the characteristics examined. The variations in the direction of the relationship from one level of importance to another are clearly at odds with the theoretical formulation of the amount model, and bring into serious question the validity of the model as an accurate explanation of the psychological processes linking environmental characteristics to satisfaction as an emotional response.

Table V-6 provides a summary comparison of the findings for the alternative research models together with results from similar studies reported in the literature. Comparing the average correlations at each importance level for the alternative formulations in the present study provides additional confirmation for the conclusions made at the end of Chapter IV; for the set of job characteristics studied, the relationship between satisfaction and discrepancy is consistently stronger at all levels of importance than is the relationship between satisfaction and perceived amount.

Vroom's³ findings regarding the effect of need for independence on the strength of the satisfaction-level of decision making relationship, shown in Table V-6, are replicated in the present study by the investigation of the effect of importance on the strength of the satisfaction-amount relationship. Referring to the table, there is very close agreement between Vroom's reported correlations and the average correlations of each of the three importance levels in the present study. The present results thus provide a confirmation of Vroom's findings concerning the multiplicative effect of importance, but the lack of consistency among findings for individual job characteristics not reflected in the average correlations, at the same time gives cause to question the validity of the amount model and Vroom's formulation as accurate predictors of satisfaction.

It was noted in Chapter IV that although the present results were in agreement with Locke's⁴ findings that higher correlations obtain

³Vroom, Work and Motivation, p. 165.

⁴Locke, "What is Job Satisfaction?", pp. 324-26.

for the satisfaction-discrepancy than for the satisfaction-amount relationship, the average correlations for both relationships in the present study are lower than the values reported by Locke. Referring again to Table V-6, where Locke's results are shown, the values of Locke's average correlations are in close agreement with the present average correlations at the high importance level for both the satisfaction-discrepancy and satisfaction-amount relationships. A plausible explanation of the higher average correlations in the two studies reported by Locke, therefore, is that Locke's respondents regarded the questionnaire items on which they were tested as highly important reasons for being satisfied or dissatisfied in their jobs, while the characteristics examined in the present study were regarded as less important, on the average, by the sample of respondents.

CHAPTER VI

THE EFFECT OF IMPORTANCE ON LEVELS OF SATISFACTION

This chapter will be concerned with the third research question posed at the end of Chapter II, "Does indifference to the amount of a job characteristic lead to a neutral emotional reaction, or is indifference accompanied by a chronic condition of either satisfaction or dissatisfaction with the characteristic?" The findings presented in Chapter V indicate that as importance decreases to a low level individuals tend to experience little or no change in satisfaction as the amount of a characteristic varies. This observation does not, however, indicate the level of satisfaction experienced by the low importance group relative to the levels experienced by the moderate and high importance groups at a particular magnitude of perceived amount or discrepancy. To answer the third research question it is necessary to examine the relative levels of satisfaction among importance levels at a particular value of amount or discrepancy for a job characteristic.

To deal with this third research question, an analysis of the results will be made in the context of the discrepancy model. The reasons for choosing the discrepancy model exclusively in preference to the amount model are threefold.

1. The models make identical predictions regarding the indifferent condition, both suggesting that indifference is accompanied by a neutral reaction.

2. The technique to be employed for testing the prediction assumes that the hypotheses tested in Chapters IV and V have been confirmed by the findings, and greater empirical support for the discrepancy model has been observed in these preceding chapters.
3. As indicated in Chapter III, the use of the amount model presents a serious methodological problem. The findings may confirm the prediction but cannot contradict it, since there is no datum for the measurement of perceived amount to serve as a fixed point for the comparison of satisfaction levels among groups with different importance levels. In the discrepancy model the condition of zero discrepancy provides the necessary absolute point of reference.

Hypothesis III and the Method of Analysis

Hypothesis III states that as importance decreases, satisfaction will tend to approach neutrality, neither satisfied nor dissatisfied, for the limiting case of no discrepancy; in the case of no discrepancy individuals perceiving a high importance will have greater satisfaction than individuals perceiving low importance for a characteristic.

From Hypothesis III, therefore, it is predicted that in the zero discrepancy condition satisfaction scores will progressively decrease from the high importance to the moderate importance to the low importance groups, as these groups were defined in Chapter V, for a given job characteristic. The appropriate method for testing the prediction is hence to compare the ordinal satisfaction scores among the three importance levels

for that sub-sample of respondents perceiving zero discrepancy for a characteristic, using a suitable nonparametric technique for the comparison. The relatively small size of the survey sample, however, prohibited the use of the method of analysis described above. When the group of individuals in the zero discrepancy condition for each characteristic was partitioned into three importance levels, the number of cases in the resulting sub-samples was so small as to prohibit even applying available techniques let alone drawing inferences with any degree of confidence.

An alternative method of analysis was suggested by Locke's¹ technique for comparing obtained functions for the satisfaction-discrepancy relationship between conditions of high and low importance on a reaction time task. Locke plotted the mean satisfaction scores for each condition versus discrepancy and then tested the obtained functions for differences in slope, implying a linear relationship for the obtained functions, and observed that for the zero discrepancy condition the obtained function for high importance was at a higher satisfaction level than the plotted line for low importance. Locke's technique closely parallels least-squares linear regression of satisfaction on discrepancy, as both methods imply no error in the measurement of discrepancy. Linear regression, however, takes more realistic account of the distribution of errors in satisfaction scores by fitting the obtained function to the individual observations rather than treating the mean satisfaction scores at different values of discrepancy as equally reliable. To analyse the

¹Locke, "What is Job Satisfaction?", p. 329.

present results, therefore, linear regression was chosen as a technique for deriving obtained functions of the satisfaction-discrepancy relationship.

In terms of the chosen method of analysis, the prediction from Hypothesis III now states that at a discrepancy value of zero, the obtained satisfaction-discrepancy functions will yield the highest satisfaction value for the high importance group and the lowest satisfaction value for the low importance group for a particular job characteristic. Findings consistent with this prediction will provide support for Hypothesis III.

Limitations of the Method of Analysis

Linear regression was chosen as a technique for the analysis of the results for Hypothesis III to compensate for the small number of observations available relative to the number required for confident inference using a more appropriate technique. The basic assumptions made in using this technique for the analysis are now explicitly stated.

1. Measurements of both satisfaction and discrepancy were obtained on a scale of interval strength or better.
2. The relationship between satisfaction and discrepancy at each level of importance is accurately represented by a linear function.
3. There is no error in the measurement of discrepancy.

Clearly the first assumption is contrary to the very nature of the meas-

uring scales employed in obtaining the data. The second assumption is meaningful only if the first assumption is accepted, since the very use of the term "linear" implies interval measurement or better. In defense of these assumptions is the observed close agreement between Pearson and Spearman correlations for the results presented in Chapters IV and V, suggesting that the conclusions drawn from an interval scale linear approximation do not drastically differ from the conclusions that would be drawn from an analysis of the ordinal data with appropriate techniques. The third assumption clearly cannot be objectively substantiated.

While the assumptions of interval measurement and linearity in themselves place a constraint on the confidence with which inferences may be made using regression analysis, any attempt to test for the significance of differences in findings between importance levels requires additional assumptions concerning the form of the distribution of errors in measurements. For this reason, no attempt will be made to apply such tests, but rather the analysis will focus on the consistency and the overall pattern of the findings among the 37 job characteristics studied.

The Results for Hypothesis III

Table VI-1 presents the results for Hypothesis III. The table shows the obtained satisfaction value, with discrepancy set to zero, at each of three importance levels for the 37 job characteristics studied. Individual satisfaction scores on the scale used for measurement may range from a minimum of "1", corresponding to "very dissatisfied", to a

maximum of "7", corresponding to "very satisfied". The portion of the scale encompassing the obtained values shown in Table VI-1 includes the following scores and the responses to which they correspond:

- 4: neither satisfied or dissatisfied
- 5: slightly satisfied
- 6: fairly satisfied
- 7: very satisfied

The mean obtained satisfaction values, averaged over the 37 characteristics are 6.46, 6.20 and 5.54 for the high, moderate and low importance levels respectively. The ranking of the mean satisfaction values is hence in accordance with Hypothesis III, with the highest average for the high importance groups and the lowest average for the low importance groups.

For the low importance level, the average obtained satisfaction value of 5.54 falls between the responses "slightly satisfied" and "fairly satisfied", while the averages for the moderate and high importance groups are in the interval between "fairly satisfied" and "very satisfied". Further insight regarding the experienced level of satisfaction as complete indifference to the amount of a characteristic is approached is provided by a partition of the characteristics according to the strength of the satisfaction-discrepancy relationship, as measured by the Pearson correlation, within the low importance level. For the 19 job characteristics with the highest correlations ($-.36$ or greater) the mean satisfaction value is 5.79, while the mean obtained satisfaction value for the

TABLE VI-1

OBTAINED SATISFACTION VALUES AT NO DISCREPANCY BY IMPORTANCE LEVEL FOR
ALL CHARACTERISTICS

Item Number	High Importance		Moderate Importance		Low Importance	
	No. of Cases	Satis- faction	No. of Cases	Satis- faction	No. of Cases	Satis- faction
1.	20	6.65	40	5.98	24	6.00
2.	21	6.82	38	6.92	24	6.04
3.	27	6.60	37	6.36	18	5.59
4.	29	6.79	36	5.97	19	5.41
5.	24	6.45	39	6.11	22	5.79
6.	20	6.75	27	6.33	38	5.50
7.	30	6.59	36	6.15	20	5.42
8.	17	6.70	35	6.33	32	6.23
9.	25	6.57	32	5.94	27	5.76
10.	28	6.60	39	6.12	16	6.11
11.	26	6.70	30	6.41	28	6.35
12.	13	6.93	27	6.58	42	5.24
13.	19	6.27	31	5.87	36	5.93
14.	25	5.74	27	5.91	29	4.86
15.	32	5.40	38	5.18	10	5.14
16.	35	6.80	30	6.05	18	5.44

(CONTINUED)

TABLE VI-1 (CONTINUED)

OBTAINED SATISFACTION VALUES AT NO DISCREPANCY BY IMPORTANCE LEVEL FOR ALL CHARACTERISTICS

Item Number	High Importance		Moderate Importance		Low Importance	
	No. of Cases	Satis- faction	No. of Cases	Satis- faction	No. of Cases	Satis- faction
17.	28	6.84	44	6.07	11	5.25
18.	21	6.23	32	5.81	32	4.98
19.	34	6.50	35	6.24	16	5.13
20.	25	6.87	35	5.99	25	5.55
21.	36	6.58	35	6.44	13	6.06
22.	33	6.27	36	6.50	15	4.43
23.	19	6.62	36	6.27	29	5.18
24.	30	6.91	38	6.92	18	4.50
25.	33	6.76	25	6.18	27	5.40
26.	28	6.22	32	6.02	21	5.52
27.	34	6.96	27	6.33	25	5.57
28.	19	6.77	31	6.33	34	5.67
29.	18	6.53	29	6.11	36	5.89
30.	9	6.31	25	6.39	48	5.47
31.	11	6.86	30	6.54	42	5.95
32.	14	6.70	36	6.34	34	5.92

(CONTINUED)

TABLE VI-1 (CONTINUED)

OBTAINED SATISFACTION VALUES AT NO DISCREPANCY BY IMPORTANCE LEVEL FOR
ALL CHARACTERISTICS

Item Number	High Importance		Moderate Importance		Low Importance	
	No. of Cases	Satis- faction	No. of Cases	Satis- faction	No. of Cases	Satis- faction
33.	24	6.87	44	6.29	16	5.95
34.	29	5.32	27	6.13	7	4.24
35.	46	5.73	30	5.95	10	5.63
36.	38	4.49	35	6.06	9	5.73
37.	16	6.49	28	6.07	35	5.94
Average for 37 Items		6.46		6.20		5.54

18 remaining characteristics with lower correlations ($-.34$ or less) is 5.27. These findings appear to suggest that when individuals are virtually completely indifferent to the amount of a job characteristic they tend to describe their emotional response to the characteristic as one of slight satisfaction. This observation is re-inforced by a consideration of the three lowest obtained satisfaction scores in Table VI-1 which are 4.24, 4.43 and 4.49, in no instance below the neutral score of 4.

Turning to a consideration of the findings for individual job characteristics, in 28 of the 37 instances the results are in complete accordance with Hypothesis III, with the highest obtained satisfaction value at no discrepancy for the high importance group and the lowest value for the low importance group. Of the 9 characteristics where the results are not perfectly consistent, only one has a higher satisfaction value for low importance than for high importance, while in 8 instances results consistent with the hypothesis may be obtained by combining the moderate importance responses either with those of the high importance group or with those of the low importance group.

To provide a summary measure of the consistency of the findings among the individual job characteristics, Kendall's W was computed for the results presented in Table VI-1 by assigning highest and lowest rankings respectively to the largest and smallest obtained satisfaction values for each characteristic. The overall ranking thus derived is consistent with the hypothesis, placing the high importance groups first and the low importance groups last. Kendall's W for the rankings is $.74$ ($p < .01$) confirming a high degree of consistency among the findings

for the individual job characteristics.

Summary and Discussion

In this chapter the effect of the variable importance on levels of satisfaction has been examined. It was predicted from the discrepancy model, the first research model presented in Chapter III, that for the condition of zero discrepancy between perceived and preferred amounts of a job characteristic the level of satisfaction decreases as the level of importance decreases, approaching neutrality as the level of importance becomes very low. The findings presented and discussed in Chapter V indicate, with a moderately high degree of consistency, that the strength of the satisfaction-discrepancy relationship decreases as the level of importance decreases. The assumption was made that this finding from Chapter V may be accurately represented by a fitted linear function at each importance level to provide an indication of the expected level of experienced satisfaction for a discrepancy of zero.

The results obtained using the fitted linear function method of analysis, presented in summary form in Table VI-2, provide general support for the part of Hypothesis III referring to the relative magnitudes of satisfaction among importance levels. The obtained satisfaction values decrease with decreasing importance both on average and for a large majority of the individual job characteristics. There is high degree of consistency in the results supporting this finding among the 37 job characteristics studied.

There is evidence from the findings, however, that for indivi-

TABLE VI-2

SUMMARY OF RESULTS FOR HYPOTHESIS III

A. Average Obtained Satisfaction Values From Fitted Linear Function at Zero Discrepancy		
Importance Level and Number of Characteristics		Satisfaction Value*
High Importance		
37 Characteristics.		6.46
Moderate Importance		
37 Characteristics.		6.20
Low Importance		
19 Characteristics with highest satisfaction-discrepancy r.		5.79
18 Characteristics with lowest satisfaction-discrepancy r.		5.27
37 Characteristics		5.54
B. Consistency of Findings		
Consistency among 37 characteristics in ranking obtained satisfaction values highest for high importance and lowest for low importance,		
Kendall's W = .74 ($p < .01$)		

*The scale responses and scores for measuring satisfaction are:

- 1: very dissatisfied
- 2: fairly dissatisfied
- 3: slightly dissatisfied
- 4: neither satisfied or dissatisfied
- 5: slightly satisfied
- 6: fairly satisfied
- 7: very satisfied

duals who are virtually completely indifferent, in terms of satisfaction, to changes in the amount of a job characteristic, the resulting level of satisfaction is not one of neutrality, but rather tends to be described as between "slightly" and "fairly" satisfied. This observation may in part explain the consistent finding from a large number of studies in industrial organizations that most employees are relatively well satisfied with their jobs.² The presence of individuals who are indifferent to the characteristics of their jobs in any employee population surveyed will tend to bias the overall distribution of satisfaction scores towards "satisfaction" rather than neutrality or "dissatisfaction" if the apparent findings reported in this chapter are correct and generalizable to other populations.

²C. A. Lee, "Variation and Consistency in the Performance-Satisfaction Relationship in Industrial Organizations" (unpublished Ph. D dissertation, University of Washington, 1969), p. 92.

perceived and preferred amounts, and (4) the importance, or affective salience, of a job characteristic. Definitions of these variables along with a description of how they were operationalized for 37 distinct work role characteristics were presented in Chapter III. Five hypotheses predicting the relationships among the variables were derived from the two research models, described as the discrepancy model and the amount model. Hypotheses Ia, IIa, and III, from the discrepancy model, predicted: a negative relationship between satisfaction and discrepancy; a decrease in the strength of the satisfaction-discrepancy relationship as importance decreases; in the case of no discrepancy, a decrease in satisfaction as importance decreases with satisfaction approaching neutrality as importance becomes very low. Hypotheses Ib and IIb, derived from the amount model, alternatively predicted: a consistent relationship between satisfaction and perceived amount; a decrease in the strength of the satisfaction-amount relationship as importance decreases.

In order to test these hypotheses a correlational field study was conducted. The research site was a large government owned utility company and the sample consisted of 86 office workers from 16 separate work groups encompassing a variety of task specialties, job titles, and educational requirements. Questionnaires were administered to measure the variables.

In Chapter IV the results in regard to Hypotheses Ia and Ib were presented. Support was obtained for both hypotheses; however, the strength of the satisfaction-discrepancy relationship was found to be substantially greater than the strength of the satisfaction-amount relationship, as indicated by the likelihood of obtaining a significant

correlation and from a characteristic-by-characteristic comparison of the magnitudes of the respective correlations. Averaged over all job characteristics, the satisfaction-discrepancy correlation was $r = -.57$, clearly greater in magnitude than $r = .35$ for the satisfaction-amount relationship. These results indicate that the discrepancy between perceived and preferred amounts of a characteristic is superior to the perceived amount of a characteristic by itself as a predictor of satisfaction.

Results regarding the effect of the variable importance on the strengths of the satisfaction-discrepancy and satisfaction-amount relationships, as specified in Hypotheses IIa and IIb respectively, were presented and discussed in Chapter V. The results provided good support for Hypothesis IIa. The satisfaction-discrepancy correlations averaged over all characteristics were $r = -.74$, $-.58$, and $-.34$ for the high, moderate, and low levels of importance respectively, with a moderately high degree of consistency among the results for individual characteristics as indicated by Kendall's $W = .62$ among the characteristics. The support obtained for Hypothesis IIb was, by contrast, substantially weaker. Although the average correlations for the satisfaction-amount relationship over all characteristics were $r = .47$, $.30$, and $.17$ respectively for the high, moderate and low importance levels in accordance with the prediction, there was a comparatively low degree of consistency among the results for individual characteristics, with Kendall's $W = .28$. This lack of consistency was evident not only in the relative magnitudes of the correlations, but as well in the direction of the relationship at

different importance levels, an observation which gives cause to seriously question the validity of the amount model as an accurate description of the process leading to experienced satisfaction.

To test Hypothesis III, a linear function was fitted to the satisfaction-discrepancy relationship to yield the expected satisfaction value for a discrepancy of zero within each importance level. The results of this analysis, reported and discussed in Chapter VI, were over all in agreement with the prediction from the hypothesis that at zero discrepancy satisfaction decreases as importance decreases. The consistency among the results for individual job characteristics in support of the hypothesis, as indicated by Kendall's $W = .74$, was high. However, in those instances where individuals were virtually completely indifferent, in terms of satisfaction, to the perceived amount of a characteristic, the resultant emotion tended to be one of mild satisfaction and not one of neutrality as predicted by Hypothesis III.

Taken together, the results for Hypotheses Ia, IIa, and III provide good empirical support for the discrepancy model as a description and explanation of the psychological process linking environmental work role characteristics to experienced job satisfaction. The weaker and less consistent findings for Hypotheses Ib and IIb cast considerable doubt on the validity of the amount model as a representation of this psychological process. Therefore, in response to the question of how the influence of job characteristics on satisfaction depends upon individual differences in attitudinal variables, the answer indicated by the findings of this study is that satisfaction is depen-

dent upon the discrepancy between the amount of a job characteristic perceived and a cognized individual standard describing a preferred amount of the characteristic. As the discrepancy increases, the level of satisfaction correspondingly diminishes. A second individual variable, the affective salience or importance attached to the job characteristic, determines both the absolute level of satisfaction and the rate at which satisfaction varies with discrepancy. Specifically, individuals perceiving a high importance experience a high level of satisfaction for little or no discrepancy and intense dissatisfaction for large discrepancies, while persons attaching a low importance to a characteristic experience correspondingly milder degrees both of satisfaction and dissatisfaction. In the extreme case of virtually no importance for a characteristic, the emotional response is one between neutrality and very mild satisfaction, quite independent of the discrepancy and hence of the perceived amount of the characteristic.

Implications for Further Research

The findings from this study have in part replicated and in part extended the original work of Edwin Locke¹ in formulating and investigating what has here been described as the discrepancy model of the psychological process whereby environmental and attitudinal variables interact to determine an emotional response of satisfaction or dissatisfaction. The present research has been deficient in many respects; the correlational design has not permitted ruling out alternative explanations, the sample was limited, and in some instances the small size of

¹Locke, "What is Job Satisfaction?", pp. 309-36.

the sample prohibited the application of the most appropriate statistical techniques of inference. Hence there is a need for verification and replication in larger samples drawn from a variety of settings and for the use of experimental as well as correlational research designs.

This study has indicated that a cognized individual standard describing a preferred amount and an individual assignment of importance or affective salience to job characteristics are the key attitudinal variables upon which satisfaction depends. This observation gives rise to further questions concerning these two variables and their nature. To what extent, for instance, are preferences and importances enduring aspects of individual personality organization as opposed to being transient mental states evoked in response to situational factors? The investigation of this question would make a useful contribution to knowledge in the areas both of personality theory and the study of attitude change.

To explain an observed difference in the response to job characteristics between city and town workers, Turner and Lawrence² have postulated differences in predispositions determined by cultural settings and recommend further research to identify the specific determinants of these differences. Such a socialization of job attitudes is similarly hypothesized by Argyris³, who suggests that indifference to the features of one's work role is a manifestation of working class values reinforced by social learning. The present findings suggest that the

²Turner and Lawrence, Industrial Jobs and the Worker, pp. 115-129.

³Chris Argyris, Integrating the Individual and the Organization (New York: John Wiley & Sons, Inc., 1964), p. 80.

pertinent dependent variables in investigating the consequences of socialization in different cultural and social settings are job characteristic preferences and importances.

The discrepancy model also provides a useful theoretical framework for the investigation of how employees adapt to an unsatisfactory work role when there is no opportunity for withdrawal. A longitudinal field study can indicate which combination of the following modes characterizes the adaptive process. (1) Perceptual distortion. Dissatisfaction is reduced by ignoring, rejecting or altering the perception of job characteristics which are discrepant from one's preferences. Turner and Lawrence⁴ present some evidence for this perceptual effect in their observation that city workers tended to rate the amounts of various characteristics in their jobs differently from the ratings given by the researchers, while there was good agreement between the researcher's ratings and those of town workers for their jobs. (2) Attitude change by modifying one's preferences. Dissatisfaction is reduced by altering one's standards to be more congruent with situational conditions. (3) Attitude change by modifying the importance of job characteristics. By reducing the importance of unsatisfactory job characteristics, the intensity of experienced dissatisfaction is reduced to a neutral emotional reaction. Argyris⁵ suggests this third mode is the primary adaptive device for minimizing frustration and dissatisfaction with a work role.

⁴Turner and Lawrence, Industrial Jobs and the Worker, p. 161.

⁵Chris Argyris, Personality and Organization (New York: Harper and Row Publishers, 1957), p. 92.

The variable satisfaction is included in many theories of motivation, implying that the psychological determinants of satisfaction will have an effect on overt behavior. It is interesting to note that the discrepancy model encompasses attitudinal variables common to two apparently disparate models of task motivation which have received considerable research attention in the recent literature. The concept of an internal standard describing a preferred amount of a reward is central to equity theory, and the dual role of the comparison standard as a determinant of both satisfaction and effort is especially evident in Pritchard's⁶ formulation of equity theory. The variable importance is conceptually and operationally equivalent to the variable valence which is one of the primary independent attitudinal variables in the expectancy theory of motivation as explicated by Vroom⁷ and more recently extended by Lawler and Porter.⁸ Since preferences and importance have been shown to interact in determining satisfaction, there appears to be some promise for a theoretical reconciliation and integration of the equity and expectancy theories of motivation centered on the interrelationship between these two variables. Such an integration would undoubtedly open a number of new avenues of research in this area.

⁶Pritchard, "Equity Theory: A Review and a Critique", pp. 205-210.

⁷Vroom, Work and Motivation, pp. 192-196.

⁸E. E. Lawler and L. W. Porter, "Antecedent Attitudes of Effective Managerial Performance," Organizational Behavior and Human Performance, II (1967), pp. 124-26.

Implications for Management Practice

If satisfaction with job characteristics is dependent upon individual differences in attitudinal variables, as suggested in this study, a severe limitation may be imposed on the potential improvements in employee morale attainable from uniform changes in job design. This is not to say that a policy of job enlargement cannot be an effective means to increasing job satisfaction, but rather that caution should be exercised in making such changes uniformly for all individuals. Unless there is evidence that an employee population is relatively homogeneous with respect to individual preferences, management concerned with increasing the level of employee satisfaction must be prepared to utilize individual interviews or questionnaires to determine employee predispositions and to provide sufficient flexibility in job designs for variations consistent with individual preferences.

Variability in the degree to which individuals regard job characteristics as important to their satisfaction or dissatisfaction similarly influences the extent to which changes in job design can influence aggregate levels of satisfaction in an employee population. Employees who attach little or no importance to job characteristics will tend to show a smaller response to changes in job design than will those who consider the attributes of the job to be highly important. An apparent finding of the present study is that for individuals who are virtually completely indifferent to amounts of job characteristics the emotional response tends to be one of mild satisfaction rather than neutrality. This suggests that the findings of organizational morale surveys

be interpreted with caution, since the presence of indifferent individuals in an employee population appears to bias the overall response in the direction of satisfaction.

Management should be aware of one further possible limitation on morale improvement through changes in job design. Even if individual preferences and attachments of importance are taken into consideration, it is still necessary to insure that employees perceive the characteristics of their jobs in the same way as does management. This emphasises the need for effective two-way communication and consultation in planning and implementing job changes, and again suggests individual interviews as the most effective device for obtaining information on employee attitudes.

In summary, indiscriminate and wholesale changes in job design should not be regarded as a cure-all technique for improving employee morale. A policy of job enlargement must be tailored to match the individual preferences and desires of employees for greatest effectiveness. This suggests that the measurement and analysis of relevant employee attitudes are essential prerequisites to the formulation of effective policy in this area.

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APPENDIX I

QUESTIONNAIRE USED FOR DATA COLLECTION

This part of the survey consists of a number of items describing characteristics that to a greater or lesser degree are part of every person's job.

Please read carefully, completely through each item before you give your answers. Each item requires that you answer four different questions:

1. The amount of the characteristic that is your job now. Answer by writing in the blank the letter (A or B or C, etc.) preceding the multiple choice response that most accurately describes your job. Do not try to guess how your supervisor or co-workers would answer, we are interested in YOUR OWN VIEWPOINT AND OPINION ABOUT YOUR OWN JOB.
2. The amount of characteristic you feel should be in your job in the practical ideal case; that is, the way you would like your job to be if you had complete freedom in writing your own job description. Answer by choosing the multiple choice response (A or B or C, etc.) that most accurately describes your ideal.
3. How satisfied or dissatisfied you are with the characteristic being discussed in your present job.
4. How important a reason the characteristic being discussed is for satisfaction or dissatisfaction in your job.

If you are in doubt, or find that a forced choice answer may be misleading, please complete the questions as required by choosing the closest answer. Make a notation in the margin explaining your doubts.

We remind you that the worth of the survey depends entirely upon you. Try to answer as carefully and openly as possible, bearing in mind that no one at your Company will see or be informed of your individual responses.

1. The physical location and posture I must work in to carry out my assigned duties:

- A. Sit or stand at the same place for most of the work day (95% of the time).
- B. About midway between answers A and C.
- C. Move in a fixed work place. Do not have to sit or stand all the time - but fixed work place.
- D. About midway between answers C and E.
- E. Move most of the time to different work places. No specified single work place.

1.1 What my job is like now_____.

1.2 As a practical ideal, what my job should be like_____.

1.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

1.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

2. The number of times my job requires a MAJOR change in scene, work place, or duties:

(Possible examples of such major changes would be field trips, training courses, inspection tours, outside conferences or seminars, special assignments, etc., for instance).

- A. Practically never.
- B. About once a year.
- C. Two to six times a year.
- D. Six to twelve times a year.
- E. Once or twice a month.
- F. Two to four times a month.
- G. Once or twice a week, or more.

2.1 What my job is like now_____.

2.2 As a practical ideal, what my job should be like_____.

2.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

2.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

3. The number of different major operations I must perform in carrying out my job duties.

(For example; calculating, looking-up information, drafting, sketching, filling out standard forms, reading, filing, writing reports, typing, contacting and consulting with another person, etc., would be instances of separate operations. Your job may require some of the operations listed above, or may require other operations not included in the list).

- A. One.
- B. Two
- C. Three to five.
- D. Six to ten.
- E. More than 10.

3.1 What my job is like now_____

3.2 As a practical ideal, what my job should be like_____.

3.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right) \left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

3.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

4. The degree of specialization in my job. The number of different kinds of assignments I work on as part of my regular duties in my job.

- A. Only one kind.
- B. Two kinds.
- C. Three kinds.
- D. Four kinds.
- E. Five kinds.
- F. Six or more kinds.

4.1 What my job is like now_____

4.2 As a practical ideal, what my job should be like_____.

4.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right) \left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

4.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

5. The number of separate assignments or duties that I usually work on or have in progress, at any one time:

- A. One.
- B. Two.
- C. Three.
- D. Four.
- E. Five.
- F. Six or more.

5.1 What my job is like now_____.

5.2 As a practical ideal, what my job should be like_____.

5.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

5.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

6. The usual length of time that elapses from when I start on an assignment to when I finish:

- A. A day or less.
- B. One or two days.
- C. Three days to a week.
- D. One week to a month.
- E. One or two months.
- F. Two months to a year.
- G. More than a year.
- X. Most assignments are continuing duties, and hence do not have a clear "start" or "finish".
- Y. The variety of lengths is so great that no single answer above is descriptive of the "typical" situation.

6.1 What my job is like now_____.

6.2 As a practical ideal, what my job should be like_____.

6.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

6.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

7. The choice I have in the methods and procedures I follow in carrying out my job duties:
- A. Detailed and specific methods and procedures are predetermined for the job.
 - B. About midway between answers A and C.
 - C. Methods and procedures are predetermined for the job, but there is lee way in applying them.
 - D. About midway between answers C and E.
 - E. A variety of optional methods and procedures are available; I am free to choose among them, or to modify them to suit the situation.

7.1 What my job is like now_____.

7.2 As a practical ideal, what my job should be like_____.

7.3 I am

(- very)	(- satisfied)
	- fairly			or	
	- slightly			- dissatisfied	
	- neither				

with this aspect of my job.

7.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

8. The choice I have in the sequence of operations I must perform to carry out a job assignment.
- A. 90% of the time the order of steps is strictly determined by the type of work or the need to follow a specific procedure or technique.
 - B. About midway between answers A and C.
 - C. About 50% of the steps must follow a strict order; the other steps can be reversed, or completed when convenient.
 - D. About midway between answers C and E.
 - E. 90% of the time I set my own sequence, choosing the step I wish to work on.

8.1 What my job is like now_____.

8.2 As a practical ideal, what my job should be like_____.

8.3 I am

(- very)	(- satisfied)
	- fairly			or	
	- slightly			- dissatisfied	
	- neither				

with this aspect of my job.

8.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

9. The choice I have in setting my own pace, or speed, at which I work.

- A. Work pace is determined by a schedule or time-table 90% of the time.
- B. About midway between answers A and C.
- C. 40% to 60% of the time I must regulate my work pace to meet the requirements of a schedule or the need to co-ordinate my work with that of other persons.
- D. About midway between answers C and E.
- E. Work pace is a matter of personal choice 90% of the time.

9.1 What my job is like now_____.

9.2 As a practical ideal, what my job should be like_____.

9.3 I am

<div style="display: inline-block; vertical-align: middle;"> <div style="display: flex; flex-direction: column; align-items: center;"> <div>- very</div> <div>- fairly</div> <div>- slightly</div> <div>- neither</div> </div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div>- satisfied</div> <div>or</div> <div>- dissatisfied</div> </div>
---	---

with this aspect of my job.

9.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

10. The choice I have in regulating the quality of work inputs to my job. When I receive manuscripts, drawings, plans, calculations, drafts, or documents to work on:

- A. I must accept and process them even if they are deficient in quality and completeness.
- B. About midway between answers A and C.
- C. I can occasionally reject or modify deficient items after consulting with a supervisor, co-worker, person in another area, or the originator of the item.
- D. About midway between answers C and E.
- E. I have considerable choice in the rejection, modification or reworking of input items on my own initiative, contacting others only as a matter of keeping them informed.

10.1 What my job is like now_____.

10.2 As a practical ideal, what my job should be like_____.

10.3 I am

<div style="display: inline-block; vertical-align: middle;"> <div style="display: flex; flex-direction: column; align-items: center;"> <div>- very</div> <div>- fairly</div> <div>- slightly</div> <div>- neither</div> </div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div>- satisfied</div> <div>or</div> <div>- dissatisfied</div> </div>
---	---

with this aspect of my job.

10.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

11. The choice I have in contacting persons in other areas or departments, or persons with firms outside the company (for instance: equipment manufacturers, service companies, etc.) to obtain information or services which assist in the completion of my assigned duties:

- A. I never or almost never have to make this choice.
- B. About midway between answers A and C.
- C. I initiate a discussion of the matter with a supervisor or another person and take part in making the decision.
- D. About midway between answers C and E.
- E. I make the decision to obtain outside services or information and act to make the necessary contact.

11.1 What my job is like now_____.

11.2 As a practical ideal, what my job should be like_____.

11.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

- 11.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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12. The choice I have in contacting customers, the public, or public agencies to obtain information and instructions to assist in the completion of my assigned duties.

- A. I never or almost never have to make this choice.
- B. About midway between answers A and C.
- C. I initiate a discussion of the matter with a supervisor or another person and take part in making the decision.
- D. About midway between answers C and E.
- E. I make the decision and act to make the contact on my own initiative.

12.1 What my job is like now_____.

12.2 As a practical ideal, what my job should be like_____.

12.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

- 12.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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13. The portion of my time taken up by housekeeping, minor duties and "busy-work" not directly associated with job assignments.

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(For example: filling in time sheets; filing; finding and collecting supplies and equipment; answering telephone inquiries for others; waiting for information; etc. are possible instances of minor chores and hinderances to getting on with your work on an assignment).

- A. Less than one hour a week.
- B. One to four hours a week.
- C. Four to eight hours a week.
- D. One to two days a week.
- E. More than two days a week.

13.1 What my job is like now_____.

13.2 As a practical ideal, what my job should be like_____.

13.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right) \left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

13.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one).

Not at all important	Slightly important	Fairly important	Very important
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14. The LEAST COMBINED AMOUNT of job experience and formal training after high school a person would normally require to properly carry out the duties in my job:

- A. Four months or less.
- B. Four to nine months.
- C. Nine to eighteen months.
- D. Eighteen months to three years.
- E. Three to six years.
- F. Six to twelve years.
- G. More than twelve years.

14.1 What my job is like now_____.

14.2 As a practical ideal, what my job should be like_____.

14.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right) \left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

14.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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In arriving at your answer to question 14.1, what combination did you use?

(Months)

(Months)

15. The opportunity my job provides to increase my knowledge by providing courses and classroom instruction in topics which help me do my work better, or contribute to my personal development and advancement. The available courses applicable to my work or advancement would be equivalent to a classroom time of about:

- A. None.
- B. One week a year.
- C. Two to four weeks a year.
- D. Five to eight weeks a year.
- E. Nine to twelve weeks a year.
- F. More than twelve weeks a year.

15.1 What my job is like now_____.

15.2 As a practical ideal, what my job should be like_____.

15.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

15.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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16. The opportunity my job provides to increase my knowledge while at work on my assigned duties. The portion of my working time available for me to explore and study new or different aspects of my work:

- A. One hour or less a week.
- B. One to four hours a week.
- C. Four to eight hours a week.
- D. One to two days a week.
- E. More than two days a week.

16.1 What my job is like now_____.

16.2 As a practical ideal, what my job should be like_____.

16.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with aspect of my job.

16.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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17. The complexity of choices I must make, the problems I could create for those who subsequently depend upon my work, and how clear the "right way" of doing my job is:
- A. There is not more than one way to go wrong, and there is no doubt about the kind of problem a poor choice would lead to.
 - B. Several kinds of problems could result from a poor choice, but by taking a few (1 to 5) things into consideration, and with some thinking, I can easily make the right choice.
 - C. A number of factors (5 to 10) have to be taken into consideration, but careful analysis and thinking will indicate the correct choice to insure problems are minimized.
 - D. The factors to be considered are numerous (10 or more), and even with careful analysis the consequences may not be clear. Considerable decision making and balancing of conflicting objectives is required.
 - E. It is extremely difficult to identify all possible consequences of alternative choices, and the factors to be considered are uncertain. There is no clear cut method of analysis. Decisions are to a large extent based on estimation, judgement, and experience.

17.1 What my job is like now_____.

17.2 As a practical ideal, what my job should be like_____.

17.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

17.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all	Slightly	Fairly	Very
important	important	important	important

18. The GREATEST length of time before my superiors would learn of my decision if I used poor judgement in dealing with a problem on an assignment:

- A. Two days at the most.
- B. A week at the most.
- C. A month at the most.
- D. Six months at the most.
- E. A year at the most.
- F. Two years at the most.
- G. Four years at the most.
- H. Eight years at the most.
- I. More than eight years.

18.1 What my job is like now_____.

18.2 As a practical ideal, what my job should be like_____.

18.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

18.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

19. The chances that serious consequences would result if I did use poor judgement in dealing with a problem on an assignment.

(Serious consequences would be for example, delays in meeting deadlines, poor service to customers, costly replacements or revisions, personal injuries, etc.).

- A. There is no possibility a poor choice would have serious consequences.
- B. About midway between answers A and C.
- C. It is possible a poor choice would have serious consequences, but this is not likely to be the case.
- D. About midway between the answers C and E.
- E. A poor choice could easily result in serious consequences.

19.1 What my job is like now_____.

19.2 As a practical ideal, what my job should be like_____.

19.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

19.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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20. How clear the beginning and end of my assignments are:

- A. My assignments are practically all continuing duties, and as such do not have a beginning or end.
- B. About midway between answers A and C.
- C. My assignments consist largely of job orders or projects, but these are often re-assigned to others before completion so I have difficulty in determining if I am close to the start or finish.
- D. About midway between answers C and E.
- E. Practically all of my assignments are job orders or projects on which there is no doubt at all as to what marks the start, finish, or degree of completion of my duties.

20.1 What my job is like now_____.

20.2 As a practical ideal, what my job should be like_____.

20.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

20.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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21. The degree to which I see the final reports, letters, documents, plans, or specifications that are the result of my own work.

- A. I rarely see them, and if I do it is by chance.
- B. About midway between answers A and C.
- C. I generally see them, but I have little opportunity to review them for completeness or accuracy.
- D. About midway between answers C and E.
- E. I always see them and I have every opportunity to review them for completeness and accuracy.

21.1 What my job is like now_____.

21.2 As a practical ideal, what my job should be like_____.

21.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

21.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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22. The degree to which I see the implementation of the results of my work:

- A. I rarely know whether the projects I have worked on are being completed or implemented, and if I do, I discover this by chance.
- B. About midway between answers A and C.
- C. I am generally advised when the projects I have worked on are being completed or implemented, and I may be involved in the completion through revisions, updates, and follow-up analysis.
- D. About midway between answers C and E.
- E. I am always advised when the projects I have worked on are being completed or implemented, and I am usually actively involved in the subsequent stages of the project.

22.1 What my job is like now_____.

22.2 As a practical ideal, what my job should be like_____.

22.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

22.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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- A. I rarely learn of the expenditures, cost savings, or service improvements that depend upon my work, and if I do it is by chance.
- B. About midway between answers A and C.
- C. I am generally informed of the expenditures, cost savings, or service improvements that depend upon my work, but I have little opportunity to study the implications in detail.
- D. About midway between answers C and E.
- E. I am always advised of the expenditures, cost savings, or service improvements that depend upon my work, and I have every opportunity to study them carefully as a guide to doing my assignments properly.

23.1 What my job is like now_____.

23.2 As a practical ideal, what my job should be like_____.

23.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

23.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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24. The degree to which I see the functional and performance results of my work:

- A. I rarely learn whether my recommendations and decisions have proven to be effective or workable, and if I do, it is by chance.
- B. About midway between answers A and C.
- C. I am generally advised whether my recommendations and decisions have proven to be effective or workable, but I have little opportunity to study their performance in detail.
- D. About midway between answers C and E.
- E. I am always informed whether my recommendations and decisions have proven effective or workable, and I have every opportunity to study their performance carefully as a guide to doing future assignments.

24.1 What my job is like now_____.

24.2 As a practical ideal, what my job should be like_____.

24.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

24.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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25 When an equipment installation has been made, an analysis or study finalized, or a construction project completed, the results of my work:

- A. Are not at all visible and cannot be distinguished from the contributions of others.
- B. About midway between answers A and C.
- C. Can be seen, but it is difficult to distinguish them from what others have contributed and decided.
- D. About midway between answers C and E.
- E. Are clearly visible and easily distinguished by the general arrangement or components of the assembly, or the conclusions and recommendations of the study.

25.1 What my job is like now_____.

25.2 As a practical ideal, what my job should be like_____.

25.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

25.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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26. My duties as part of a project on which a number of people work can best be described as:

- A. Transcribing, detailing, or tracing plans, reports, or specifications prepared by others.
- B. About midway between answers A and C.
- C. Preparing reports, follow-up analyses, plans, designs, calculations, costs or bills of material by following established codes, standards, drawings, and other specifications. The required results or operational characteristics, and the general approach to problems are specified by others.
- D. About midway between answers C and E.
- E. Participating in the planning of methods and approaches to obtaining desired results. Assigned problems are dealt with by modifying established guides, devising new approaches, and drawing conclusions from comparable situations.

26.1 What my job is like now_____.

26.2 As a practical ideal, what my job should be like_____.

26.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

26.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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27. How critical my job is in the work flow of jobs necessary to complete a project:

- A. My job is not essential, and if necessary my job duties could be carried out by other divisions or departments with no difficulty.
- B. About midway between answers A and C.
- C. It is an important job which could possibly be done by another division or department in an emergency, but only at considerable expense, difficulty and inconvenience.
- D. About midway between answers C and E.
- E. It is a unique and indispensable step in the work flow. Other divisions or departments have neither the knowledge or ability to perform my job duties. Without the work done in my job, it would not be possible to complete the project.

27.1 What my job is like now_____.

27.2 As a practical ideal, what my job should be like_____.

27.3 I am

(- very - fairly - slightly - neither)	(- satisfied or - dissatisfied)
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with this aspect of my job.

27.4 Not at all important	Slightly important	Fairly important	Very important
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NOTE: PLEASE READ OVER QUESTIONS (28), (29), (30) and (31) BEFORE ANSWERING QUESTION (28). THIS MAY HELP TO CLARIFY THE KIND OF INFORMATION BEING SOUGHT.

28. As part of carrying out his job duties, a person must often have face-to-face contact with others for the exchange of information and instructions. The supervisor, co-workers, and persons in adjoining departments would typically be involved in such contacts.

The number of persons with whom I must have such necessary face-to-face contact in a typical working day is:

- A. None
- B. One or two.
- C. Three to six.
- D. Seven to fourteen.
- E. Fifteen or more.

28.1 What my job is like now_____.

28.2 As a practical ideal, what my job should be like_____.

28.3 I am

(- very - fairly - slightly - neither)	(- satisfied or - dissatisfied)
---	---

with this aspect of my job.

28.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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29. The necessary contacts with other persons (Question 28) typically:

- A. Take up less than 5% of my working time and in each case are brief and involve little talking.
- B. Take up 5% to 10% of my working time and in each case may last for several minutes, and involve a fair amount of talking.
- C. Take up 10% to 25% of my working time, and in each case may last up to a half hour or more.
- D. Take up 25% to 50% of my working time and in each case may last an hour or more.
- E. Take up more than 50% of my working time and in each case may last for several hours.

29.1 What my job is like now_____.

29.2 As a practical ideal, what my job should be like_____.

29.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

29.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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30. In addition to the necessary person-to-person contacts required by their jobs, (questions 28 and 29 above), people may often engage in contacts and discussions not strictly required by the work. Either job related matters or other topics might be discussed in these optional contacts. Again the supervisor, co-worker, and persons in adjoining offices would most likely be involved in such optional contacts.

The number of persons available for optional contacts in my job is:

- A. None more than those in question 28.
- B. One or two more than those in question 28.
- C. Three to six more than those in question 28.
- D. Seven to fourteen more than those in question 28.
- E. Fifteen or greater more than in question 28.

30.1 What my job is like now_____.

30.2 As a practical ideal, what my job should be like_____.

30.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

30.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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31. The amount of time my job gives me to engage in such optional contacts (Question 30) without reprimand:

- A. 0%.
- B. Some, but less than 10% of working time.
- C. 10% to 25% of working time.
- D. 25% to 50% of working time.
- E. More than 50% of working time.

31.1 What my job is like now_____.

31.2 As a practical ideal, what my job should be like_____.

31.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

31.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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32. The nature of my work and the information exchanged in a required or optional face-to-face contact in my job requires that:

- A. Others always approach me first.
- B. Others approach me most of the time.
- C. Others approach me about the same number of times that I approach others.
- D. I approach others most of the time.
- E. I always approach others first.

32.1 What my job is like now_____.

32.2 As a practical ideal, what my job should be like_____.

32.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

32.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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33. In addition to serving as a means of exchanging instructions and information, person-to-person contacts on the job may also provide an opportunity to give and receive assistance, support and encouragement as aids to properly completing an assigned duty.

The opportunity for me to give and receive support and help is available in:

- A. None of my on-the-job contacts with others.
- B. A few of my on-the-job contacts with other persons.
- C. About half of my on-the-job contacts with other persons.
- D. Most of my on-the-job contacts with other persons.
- E. All of my on-the-job contacts with other persons.

33.1 What my job is like now_____.

33.2 As a practical ideal, what my job should be like_____.

33.3 I am

(- very)	(- satisfied)
	- fairly			or	
	- slightly			- dissatisfied	
	- neither				

with this aspect of my job.

33.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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NOTE: PLEASE READ OVER QUESTIONS (34) and (35) BEFORE ANSWERING QUESTION (34). THIS MAY HELP TO CLARIFY THE TYPE OF INFORMATION BEING SOUGHT.

34. As an opportunity for technical advancement and promotion, my job can best be described as:

- A. A training position for movement to a technical job at a higher pay grade or rank.
- B. About midway between answers A and C.
- C. Basically a permanent position with a medium chance of movement to a technical job at a higher pay grade or rank.
- D. About midway between answers C and E.
- E. Basically a permanent job with little or no chance of movement to a technical job at a higher pay grade or rank.

34.1 What my job is like now_____.

34.2 As a practical ideal, what my job should be like_____.

34.3 I am

(- very)	(- satisfied)
	- fairly			or	
	- slightly			- dissatisfied	
	- neither				

with this aspect of my job.

34.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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35. As an opportunity for supervisory and managerial advancement and promotion, my job can best be described as:

- A. A training position for movement to a supervisory job at a higher pay grade or rank.
- B. About midway between answers A and C.
- C. Basically a permanent position with a medium chance of movement to a supervisory job at a higher pay grade or rank.
- D. About midway between answers C and E.
- E. Basically a permanent position with little or no chance of movement to a supervisory job at a higher pay grade or rank.

35.1 What my job is like now_____.

35.2 As a practical ideal, what my job should be like_____.

35.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

35.4 As a reason for being satisfied or dissatisfied in my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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36. The amount of pay and benefits my job provides in comparison to the minimum I require to provide for food, clothing, shelter, and other basic necessities of life for myself and my family (if applicable) per year.

- A. About \$2000 less than the least I require.
- B. About \$1000 less than the least I require.
- C. About equal to the least I require.
- D. About \$1000 more than the least I require.
- E. About \$2000 more than the least I require.
- F. About \$3000 more than the least I require.
- G. About \$4000 more than the least I require.
- H. About \$5000 more than the least I require.
- I. About \$6000 more than the least I require.

or greater

36.1 What my job is like now_____.

36.2 As a practical ideal what my job should be like_____.

36.3 I am $\left(\begin{array}{l} - \text{very} \\ - \text{fairly} \\ - \text{slightly} \\ - \text{neither} \end{array} \right)$ $\left(\begin{array}{l} - \text{satisfied} \\ \text{or} \\ - \text{dissatisfied} \end{array} \right)$

with this aspect of my job.

36.4 As a reason for being satisfied or dissatisfied with my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
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QUESTION (38) SHOULD BE ANSWERED BY MEN ONLY

37. In the opinion of my friends and relatives, the status, respect, and prestige associated with my job are about the same as for:

- A. A Graduate Nurse's job.
- B. About midway between answers A and C.
- C. A Laboratory Technician's job.
- D. About midway between answers C and E.
- E. A Dentist's Attendant's job.
- F. About midway between answer's E and G.
- G. A Female Bookkeeper's job.
- H. About midway between answers G and I.
- I. A Hair Dresser's job.

37.1 What my job is like now_____.

37.2 As a practical ideal, what my job should be like_____.

37.3 I am

- very)	- satisfied)
- fairly		or	
- slightly		- dissatisfied	
- neither			

with this aspect of my job.

37.4 As a reason for being satisfied or dissatisfied with my job, this aspect is: (circle one)

Not at all important	Slightly important	Fairly important	Very important
-------------------------	-----------------------	---------------------	-------------------

38. In the opinion of my friends and relatives, the status, respect and prestige associated with my job are about the same as for:

- A. A Chemical Engineer's job.
- B. About midway between answers A and C.
- C. A High School Teacher's job.
- D. About midway between answers C and E.
- E. A Construction Inspector's job.
- F. About midway between answers E and G.
- G. A Television Repairman's job.
- H. About midway between answers G and I.
- I. A Sheet Metal Worker's job.

38.1 What my job is like now_____.

38.2 As a practical ideal, what my job should be like_____.

38.3 I am

- very)	- satisfied)
- fairly		or	
- slightly		- dissatisfied	
- neither			

with this aspect of my job.

38.4 As a reason for being satisfied or dissatisfied with my job, this aspect is: (circle one)

APPENDIX II

RESULTS FOR HYPOTHESES Ia, Ib, IIa, AND IIb
IN TERMS OF
SPEARMAN RANK CORRELATION COEFFICIENTS

TABLE AII-1

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR ALL JOB
CHARACTERISTICS-SPEARMAN CORRELATIONS

Item Number And Description	Number Of Cases	Spearman Correlation	Significance Level
1. Physical Location	84	-.58	.001
2. Change of scene	83	-.78	.001
3. Different major operations	82	-.73	.001
4. Kinds of assignments	84	-.74	.001
5. Jobs at one time	85	-.67	.001
6. Elapsed time for job	85	-.64	.001
7. Choice of methods	86	-.70	.001
8. Choice of sequence	84	-.73	.001
9. Choice of pace	84	-.58	.001
10. Regulate input quality	83	-.57	.001
11. Peer contact choice	84	-.73	.001
12. Public contact choice	82	-.50	.001
13. Weekly housekeeping	86	-.73	.001
14. Minimum experience	81	-.40	.001
15. Courses available	81	-.61	.001
16. Learning on job	83	-.76	.001
17. Complexity of choices	83	-.49	.001
18. Span of discretion	85	-.47	.001
19. Chance of serious error	85	-.43	.001
(CONTINUED)			

TABLE AII-1 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR ALL JOB
CHARACTERISTICS-SPEARMAN CORRELATIONS

Item Number And Description	Number Of Cases	Spearman Correlation	Significance Level
20. Chance of serious error	85	-.54	.001
21. Own output visibility	84	-.74	.001
22. Implementation visibility	84	-.57	.001
23. Consequence visibility	84	-.69	.001
24. Performance visibility	86	-.65	.001
25. Visibility in product	85	-.65	.001
26. Contribution originality	81	-.66	.001
27. Critical to work-flow	86	-.65	.001
28. Required contacts	84	-.42	.001
29. Required contact time	83	-.56	.001
30. Extra optional contacts	82	-.18	.054
31. Optional contact time	83	-.56	.001
32. Approach others	84	-.51	.001
33. Give help in contacts	84	-.52	.001
34. Technical advancement	83	-.64	.001
35. Supervisory advancement	86	-.67	.001
36. Pay to required pay	82	-.38	.001
37. Occupational prestige	79	-.55	.001
Average correlation over 37 Items.		-.60	

TABLE AII-2

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR ALL JOB
CHARACTERISTICS-SPEARMAN CORRELATIONS

Item Number And Description	Number Of Cases	Spearman Correlation	Significance Level
1. Physical location	86	.14	.104
2. Change of scene	86	.31	.002
3. Different major operations	86	.04	.351
4. Kinds of assignments	85	.18	.054
5. Jobs at one time	86	-.31	.002
6. Elapsed time for job	86	-.11	.156
7. Choice of methods	86	.22	.019
8. Choice of sequence	85	.46	.001
9. Choice of pace	86	.39	.001
10. Regulate input quality	85	.16	.069
11. Poor contact choice	85	.44	.001
12. Public contact choice	83	.29	.004
13. Weekly housekeeping	86	-.44	.001
14. Minimum experience	84	.07	.273
15. Courses available	82	.44	.001
16. Learning on job	84	.64	.001
17. Complexity of choices	85	-.16	.075
18. Span of discretion	85	-.41	.001
19. Chance of serious error	85	.17	.064
(CONTINUED)			

TABLE AII-2 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR ALL JOB
CHARACTERISTICS-SPEARMAN CORRELATIONS

Item Number And Description	Number Of Cases	Spearman Correlation	Significance Level
20. Clarify of start-finish	86	.37	.001
21. Own output visibility	84	.69	.001
22. Implementation visibility	85	.55	.001
23. Consequence visibility	85	.59	.001
24. Performance visibility	86	.62	.001
25. Visibility in product	85	.62	.001
26. Contribution originality	84	.43	.001
27. Critical to work-flow	86	.54	.001
28. Required contacts	85	.12	.128
29. Required contact time	84	.03	.404
30. Extra optional contacts	83	-.13	.112
31. Optional contact time	84	-.05	.341
32. Approach others	84	-.27	.007
33. Give help in contacts	85	.59	.001
34. Technical advancement	84	-.44	.001
35. Supervisory advancement	86	-.55	.001
36. Pay to required pay	--	--	--
37. Occupational prestige	79	-.49	.001
Average absolute correlation over 36 items.		.35	

TABLE AII-3

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-SPEARMAN CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	rho	No. of Cases	rho	No. of Cases	rho
1.	20	-.72	40	-.53	24	-.50
2.	21	-.81	38	-.76	24	-.68
3.	27	-.80	37	-.75	18	-.53
4.	29	-.87	36	-.67	19	-.34
5.	24	-.80	39	-.59	22	-.53
6.	20	-.87	27	-.70	38	-.43
7.	30	-.88	36	-.68	20	-.25
8.	17	-.73	35	-.70	32	-.69
9.	25	-.90	32	-.58	27	-.19
10.	28	-.71	39	-.50	16	-.55
11.	16	-.78	30	-.66	28	-.69
12.	13	-.68	27	-.74	42	-.28
13.	19	-.73	31	-.72	36	-.73
14.	25	-.76	27	-.48	29	-.03
15.	32	-.77	38	-.47	10	-.33
16.	35	-.84	30	-.77	18	-.60
17.	28	-.64	44	-.46	11	-.50

(CONTINUED)

TABLE AII-3 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-SPEARMAN CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	rho	No. of Cases	rho	No. of Cases	rho
18.	35	-.78	30	-.50	18	-.13
19.	34	-.39	35	-.58	16	-.42
20.	25	-.63	35	-.59	25	-.31
21.	36	-.86	35	-.66	13	-.39
22.	33	-.72	36	-.70	15	-.01
23.	19	-.90	36	-.75	29	-.30
24.	30	-.86	38	-.71	18	-.07
25.	33	-.90	25	-.47	27	-.29
26.	28	-.81	32	-.57	21	-.47
27.	34	-.84	27	-.60	25	-.60
28.	19	-.70	31	-.38	34	-.26
29.	18	-.63	29	-.41	36	-.55
30.	9	-.75	25	-.34	48	+.03
31.	11	-1.00	30	-.44	42	-.48
32.	14	-.62	36	-.60	34	-.36
33.	24	-.78	44	-.44	16	-.19

(CONTINUED)

TABLE AII-3 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND DISCREPANCY FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-SPEARMAN CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	rho	No. of Cases	rho	No. of Cases	rho
34.	49	-.64	27	-.69	7	-.26
35.	46	-.70	30	-.63	10	-.58
36.	38	-.30	35	-.57	9	-.22
37.	16	-.60	28	-.57	35	-.36
Average over 37 Items		-.75		-.59		-.38

Consistency among 37 characteristics in ranking
correlations highest for high importance and
lowest for low importance,

Kendall's $W = .69$ ($p < .01$)

TABLE AII-4 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-SPEARMAN CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	rho	No. of Cases	rho	No. of Cases	rho
17.	29	-.29	44	-.02	12	-.52
18.	21	-.70	32	-.56	32	.06
19.	34	.15	35	-.08	16	.14
20.	25	.22	36	.32	25	.12
21.	36	.86	35	.63	13	.28
22.	34	.65	36	.74	15	-.32
23.	19	.92	36	.56	30	.16
24.	30	.82	38	.69	18	-.21
25.	33	.80	25	.21	27	.28
26.	28	.56	35	.42	21	.12
27.	34	.63	27	.40	25	.24
28.	19	.14	31	-.07	35	.10
29.	18	.13	29	-.08	37	-.04
30.	9	-.50	25	.04	49	-.10
31.	11	-.39	30	.25	43	-.16
32.	14	-.33	36	-.40	34	-.12

(CONTINUED)

TABLE AII-4 (CONTINUED)

RELATIONSHIP BETWEEN SATISFACTION AND PERCEIVED AMOUNT FOR INDIVIDUALS
WITH DIFFERENT LEVELS OF IMPORTANCE-SPEARMAN CORRELATIONS

Item Number	<u>High Importance</u>		<u>Moderate Importance</u>		<u>Low Importance</u>	
	No. of Cases	rho	No. of Cases	rho	No. of Cases	rho
33.	25	.58	44	.43	16	.41
34.	49	-.61	27	-.21	8	.23
35.	46	-.63	30	-.54	10	-.42
36.	--	--	--	--	--	--
37.	16	-.63	28	-.53	35	-.21
Average over 36 Items		.44		.33		.12

Consistency among 36 characteristics in
ranking correlations highest for high
importance and lowest for low importance,

Kendall's $W = .26$ ($p < .01$)

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